AIR CONDITIONING & REFRIGERATION news

The Newspaper of the Industry

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INSIDE DOPE

Learn to live and laugh— Thus delay your epitaph

By GEORGE F. TAUBENECK

Stories of the Week
Gags of the Week
Now We Get Serious
Verse of the Week
Delightful Hobby
Grandson Outfoxes Grampaw
The Friendly Way
Staff Memo
Pausing Thought
Add Stupid Jokes
Read Twice
Modest Genius

Stories of the Week

Dirt and grime encrusted a squat Brink's money truck parked near a Detroit bank. An inspired wag had succeeded in eluding the scrutiny of the guards. Across one side of this truck was scrawled:

"Come in and browse around."

Free-lance writer submitted a manuscript to *True Fiction Magazine.* Title of his confession:

"I Slept with a Communist."

First editor thought that title wasn't sufficiently provocative. He added:

"I Slept with a Communist for the FBI."

Final editor gave it THE WORKS, to wit:

"I Slept with a Communist for the FBI and Met My Wife."

Gags of the Week

Speaking of the GAW (guaranteed annual wage) a farmer friend of ours says he wants GAR (guaranteed annual rain).

Never buy anything that eats.—BILLY ROSE.

Best Man at a wedding seldom has a chance to prove he is.

Now We Get Serious

Many weird laws haunt our states and cities, as we have indicated in past columns.

New York City is no exception. Its denizens could be pinched if the following laws were strictly enforced:

Buying magazines on Sunday . . . shooting rabbits from the rear platform of Third Ave. streetcars . . . reading while walking city streets . . . allowing domestic animals (cats excepted) to enter a bakery.

Also, lounging in front of the City Hall . . . selling gems after sundown . . . entering or leaving a city park wearing a flower or corsage . . . stepping on a manhole in a public thoroughfare.

Another Manhattan ordinance portends that it is unlawful for policemen to grow mustaches, beards, or sideburns.

This one we favor:

Cab drivers are forbidden to recommend a restaurant to a fare.

Verse of the Week

All the world over, I wonder, in
land that I never have trod,
Are the people eternally seeking
for the signs and the steps of a
God?

(Concluded on Page 7, Col. 3)

Sensational Headlines Mislead Public On Food Preservation by Irradiation

DETROIT — Despite the hullaballoo that came out of a recent Congressional committee meeting, discussing the possibilities of preserving foods by irradiating them with atomic energy, householders would seem ill-advised to start throwing away their household refrigerators and food freezers, or stores to throw away their refrigerated fixtures.

The sensational headlines that came out of this discussion of the *possibilities* were not confined to the newspapers. One trade periodical (which carries a considerable amount of refrigeration advertising) headlined its story "End of Refrigeration Seen in Atomic Energy."

The following would seem to be the facts:

The Atomic Energy Commission and the Army Quartermaster Corps are working jointly on a $5 million project of irradiating foods and meats with atomic energy, in the form of gamma irradiation.

Commercial irradiation machinery is expected to be developed by firms now working with the government on this project, within two years after the establishment, in 1958, of a pilot plant operation.

The gamma ray irradiation seems to keep *certain* foods from spoilage for some periods of time without refrigeration. However, it is not known whether these foods are really edible, and whether or not all their nutritive value is retained. A feeding experiment is now under way with some volunteers from the ranks of conscientious objectors.

The process would also seem to extend the shelf life of certain perishables *under refrigeration.*

On a number of foods the irradiation process tried thus far has made certain foods unfit to eat, it is reported. Lettuce is said to have gone limp, and tomatoes squashy under the process. Milk and orange juice are virtually undrinkable, after being treated, and butter is given a taste that makes it unpalatable.

The process is also said to turn meats an unappetizing grayish color. However, when it was applied to frozen meats, there was no color change, it was said.

Investigations are still being made on the effects on the nutritive value of the food processed.

(For more detailed background information on this subject readers can refer to the article "How Will 'Atom Treatment' of Foods Affect Refrigeration" published on page 15 of the March 7, 1955 issue of AIR CONDITIONING & REFRIGERATION NEWS.)

16-Point Room Air Conditioner Selling, Ad Standards Announced by ARI, NBBB

WASHINGTON, D. C.—A suggested 16-point program of standards for advertising and selling room air conditioners was announced recently by the Air-Conditioning and Refrigeration Institute and the National Better Business Bureau.

A major objective of the standards is the elimination of public confusion about the cooling capacity of room air conditioners by providing a single accurate, authoritative method of expressing such claims on a basis which can be readily verified.

This will be accomplished by making the claims in terms of the B.t.u.-per-hour capacity of the model as determined by a standard established by the Air-Conditioning and Refrigeration Institute.

The new program developed from more than a year of discussions between the two sponsoring organizations in the course of which nearly all manufacturers of room air conditioners and local Better Business Bureaus throughout the country were consulted.

In announcing the availability of the recommended standards, ARI Managing Director George S.

(Concluded on Page 4, Col. 4)

ASRE To Feature Top Engineers at June 12 Meeting

NEW YORK CITY—Some of the country's foremost refrigeration and air conditioning engineers will address the 42nd semiannual meeting of the American Society of Refrigerating Engineers at the Hotel Schroeder in Milwaukee, June 12 to 15.

In addition to three technical sessions, the diversified technical program will include an air conditioning conference, a domestic refrigerator engineering conference, and six forums.

Program Committee Chairman E. P. Palmatier, Carrier Corp., has announced the following program:

MONDAY A.M., JUNE 13

Technical Session, E. P. Palmatier, Carrier Corp., presiding.

"The Injection Refrigeration Cycle," Willis Merle Carter, Ph.D., professor of machine design, University of Kentucky.

"Characteristics and Perform-

(Concluded on Back Page, Col. 1)

Restaurant Operators See Latest Refrigeration, Air Conditioning Products

CHICAGO — Latest refinements in refrigeration and air conditioning equipment for food service operators were exhibited by more than 50 manufacturers at the recent National Restaurant Association exposition here.

Many of the improved refrigerated products designed for restaurant and institutional kitchens and food service areas will be pictured in this and succeeding issues of the NEWS. Pictures in this issue will be found on pages 16 and 17.

The estimated 30,000 visitors parading around the Navy Pier viewed a wide selection of new model two-temperature reach-in refrigerators, improved backbar equipment, soda fountains, and milk dispensers.

Increased capacity ice cube makers, refrigerated display cases, beverage coolers, and soft drink dispensers were abundantly displayed.

(Concluded on Page 4, Col. 3)

HP&ACCNA Becomes Mechanical Contractors Assn. of America

HOUSTON, Texas—A new name was one of the major actions completed by the Heating, Piping & Air Conditioning Contractors National Association at its convention here.

The association approved the new name of Mechanical Contractors Association of America.

Major resolution passed by the 500 members attending was support of a message to Senator Kilgore urging that the Federal government recognize mechanical contractors as specialists in heating, piping, air conditioning, and ventilation.

This would require an amendment to Senate Bill 1644, now before the judiciary committee of the Senate. The bill would require general contractors in Federal contracts to name each subcontractor in their bids.

Members of the association indicated they prefer a stronger law —listing each subcontractor's bid in dollars, to prevent bid peddling, whereby a general contractor in a Federal project could reduce his original subcontracting bids and increase his profit by calling in other subcontractors to do work cheaper.

New president of the Mechanical Contractors Association with its 41 local associations is Edward Jungbert of Louisville, Ky. He succeeds J. DeWitt Morrow of The Warren Co., Houston.

George Hall, president of Hyland, Hall & Co., Madison, Wis., was elevated from treasurer to vice president. Joseph Spitzley of R. L. Spitzley Heating Co., Detroit, was elected to succeed Hall as treasurer.

A talk on labor union strength by William B. Barton of the United States Chamber of Commerce pointed up the action of the convention in moving to take the necessary steps to have direct representation on the National Joint Board for Settlement of Jurisdictional Disputes.

The unions' most ominous gain in power, said Barton, is in the political area.

"The leaders behind the AFL-CIO merger make no secret of their plans for political dominance.

"Unions have great financial strength today," Barton pointed out. "They also have tremendous power and at times have closed down basic industries."

On the union side, the contractors heard talks by Martin P. Durkin, former Secretary of Labor and president of the United Association of Journeymen & Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada.

They also heard from Robert E. Murphy, president of the National Association of Plumbing Contractors.

"Modernization is built around heating and plumbing," Durkin told the contractors, "and everything else is incidental. In this field you can be the prime contractor and somebody else the subcontractor."

Others are seeking the business of the contractors, Durkin warned. He declared, significantly, that because his union wants to continue to aid the total progress of the industry they will maintain their labor judisdiction as it now stands.

"We expect employers to keep step," Durkin concluded. "I'm sure we will receive your cooperation, and I can guarantee you ours."

The mechanical trades are in danger of losing much of the future contracting volume unless there is a meeting of minds,

(Concluded on Page 4, Col. 4)

Gifford President Of Crosley and Bendix

NEW YORK CITY—Election of Chester G. Gifford as president of the Crosley and Bendix Home Appliances divisions was announced recently by Victor Emanuel, chairman and president of Avco Mfg. Corp.

Gifford, who was also elected a vice president of Avco, was president of Schick, Inc. until 1954.

James D. Shouse, vice president of Avco, who has served as general manager of the Crosley and Bendix Home Appliances divisions on an interim basis, will resume his full-time duties as chairman of Avco's subsidiary, Crosley Broadcasting Corp., following an extended rest.

Gifford had previously served

(Concluded on Page 4, Col. 5)

ARI Will Meet In Hot Springs June 5

WASHINGTON, D. C. —Annual meeting of the Air-Conditioning and Refrigeration Institute will be held June 5 through 8 at The Homestead, Hot Springs, Va., with Product Section meetings on June 6 and 7, and the annual meeting of the whole association starting Wednesday morning, June 8.

Guest speaker for the annual meeting will be Joseph E. Moody, president of the Southern Coal Producers' Association, a leading expert in the field of labor rela-

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Sunday Labor Case

Ohio Court of Appeals Upholds Conviction Of Dealer's Official

TOLEDO—In separate actions, the Sixth District Court of Appeals upheld the conviction of an H & M Accessories Co. official charged with violating a state law prohibiting common labor on Sundays, but reversed convictions of four employes accused of breaking the same law.

The company operates three appliance and auto accessory outlets called Harry's Auto Stores. The official, Geoffrey H. Himelhoch, Jr., vice president of the concern, was fined $10 and costs last December by Municipal Court Judge Frank W. Wiley.

Last January, Municipal Court Judge Geraldine Macelvane fined the four employes $25 each. In reversing the convictions of the employes, the appeals court ruled there was not sufficient evidence to uphold Judge Macelvane's judgment. The court ordered a new trial for them.

Sutton Names Memphis Firm

MEMPHIS—McDonald Bros. Co. here has been appointed mid-south distributor for O. A. Sutton Corp., manufacturer of central air conditioning systems for homes.

Calif. Meat Dealers To Fight Plant Pre-Packaging; Boycott Threatened

SAN FRANCISCO — Aroused over reports that one or two large national meat packers are preparing to pre-package meats at their branch packing houses here, a group of northern California independent retail meat dealers has threatened to boycott any packer who starts pre-packaging meat at the plant level, it has been reported.

Plant-level pre-packaging would be fought by both independent meat dealers and the butchers' union.

Butchers already have been hit by the increasing popularity of frozen meats, it was pointed out by the group.

And meat dealers fear that central pre-packaging by packers would lead to installation of meat display cases by non-food businesses such as drugstores and gas stations.

The Western States Meat Packers Association has indicated that its members won't start pre-packaging operations. However, there is speculation that eastern packers might begin shipping meat west from packaging centers in the east or bigger chains might ask the larger eastern packers to establish west coast plants to supply their stores.

Philco Filter Handles Smog Irritants, Odors

PHILADELPHIA—A new type of air conditioner filter that combines activated charcoal and glass fiber to efficiently cleanse the air of harmful smog irritants and odors, as well as providing conventional filtering of dust and pollen, has been introduced by Philco Corp.'s Accessory Div.

The company says it is the first to introduce the activated charcoal type filter that absorbs unpleasant odors and is exclusive distributor for the "Odor-Stop" air conditioner filter.

The new filter is being used in top of the line 1955 Philco room air conditioners as original equipment. Distributors, dealers, and authorized servicemen are handling the new filters as replacement units. They range in suggested list price from $3.95 to $5.95. All filters are one-half inch thick.

A complete campaign is being planned by the Accessory Div. to provide Philco dealers and servicemen with colorful display material as support in their sales of Odor-Stop filters.

Shoe Store Gets Cooling

JAMESTOWN, N. Y.—Air conditioning has been installed in the new Thom McAn Shoe Store at 103 W. Third St. as part of a remodeling program.

WHAT . . . WHEN . . . WHERE

Air Conditioning & Refrigeration Institute (ARI) Annual Meeting
June 5-8, Hot Springs, Va.

American Society of Refrigerating Engineers (ASRE) Summer Meeting
June 12-15, Schroeder hotel, Milwaukee.

National Association of Retail Grocers, Semi-Annual Meeting
June 12-16, Navy Pier, Chicago.

Mid-Year Home Furnishings Market
June 20-30, American Furniture Mart and Merchandise Mart, Chicago.

American Society of Heating & Air Conditioning Engineers (ASHAE) Regional Meeting
June 27-29, San Francisco.

Exposition of Air Conditioning & Refrigeration Industry
Nov. 28-Dec. 1, Atlantic City, N. J.

SMI To Emphasize 4 Points In Effort To Up Frozen Food Handling Productivity

CLEVELAND — The newly formed frozen foods productivity committee of the Super Market Institute had decided on four categories of problems that it will attempt to solve to get greater productivity in the handling of frozen foods, Fred Zeuch, committee chairman, reported.

After analyzing some 40 problems in this field that are plaguing supermarket operators, the committee has agreed that the following four offer the most reasonable chance of successful solution in the near future:

1. Shipping containers, including such problems as wet strength, zipper openers, standard pack, adequate marking on all sides, rectangular shape, elimination of master containers, and case inserts to call attention to the need for temperature control.

2. Package design including such problems as package size and shape, white spot (for marking price on the package) standard weights, improved films, and complete and accurate labeling.

3. Quality standards for frozen foods.

4. Retailer and consumer education to assure proper handling of frozen foods through adequate temperature control all the way from packer to kitchen. This may involve development of an effective training and public relations program, Zeuch said.

'Mobile Ice Service Unit' Uses York 'FlakIce' Machine and Gennett Cart

YORK, Pa.—A "Mobile Ice Service Unit," which utilizes a York "FlakIce" automatic ice maker and a Gennett ice cart, has been announced by York Corp. here and Gennett & Sons, Inc. of Richmond, Ind.

The model DER-2B York-FlakIce automatic ice maker rests on a specially designed stand with an opening underneath for the Gennett ice cart.

The cart is placed in position and the machine is turned on. When the cart is full, the automatic thermostat control stops the ice making operation. The machine is then turned off and the cart withdrawn. A new one is placed in position and the ice maker is started up again.

The Mobile Ice Service Unit prevents wasted time and motion by providing ice near the point of use, the companies claim. The York ice maker can be located strategically at various floors or sections and the Gennett carts used to carry the ice the short, additional distances.

The model DER-2B York-FlakIce automatic ice maker is a completely self-contained unit with a hermetically sealed refrigeration circuit. The unit can produce up to 300 lbs. of ice fragments a day, or as little as 200 lbs. a day.

Gennett ice carts are available in four sizes of 50, 75, 150, and 250-lb. capacity.

*with no room to expand?

KOCH Display cases assure maximum efficiency of premium space

KOCH Display Cases convert low-profit floor space into high-profit sales space. Field surveys report an instant rise in sales, immediately after KOCH display cases are installed. There's a reason . . . KOCH engineers combine with merchandising experts to develop display cases with built-in quality and sales power throughout.

Available in top display or double duty models—self-contained or remote, in lengths from 6 to 10 feet.

Koch dealerships are profitable. Write today for franchise information.

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401 FUNSTON ROAD • KANSAS CITY 15, KANSAS

down by the seashore
TATEM Surf Club
Carefree living enhanced by . . . large, cheerful guest rooms . . . private pool, ocean beach, cabana club . . . dining room and cocktail lounge.
Rates from $8 double, European Plan.
SELECTED CLIENTELE
Write for Booklet
On the Ocean at 43rd Street MIAMI BEACH

State Actions Forcing Frozen Foods Industry To Set Standards

CHICAGO—Proposed state laws to regulate temperatures for handling frozen foods probably will tend to force the industry to establish its own code to insure quality, in the opinion of A. B. Efroymson, president of the American Warehousemen's Association.

He spoke at a press conference which preceded the annual joint meetings here of the AWA and the National Association of Refrigerated Warehouses.

The conference was told that warehousemen, packers, and distributors are cooperating in a program for educating retailers on the proper handling of frozen foods.

H. C. Diehl, director and secretary of the Refrigeration Research Foundation, reported that research is being conducted to determine "end points" of temperature damage for all the varieties of frozen foods.

Webster Groves, Mo. Demands Water Savers For Air Conditioners

WEBSTER GROVES, Mo.—An ordinance passed recently by the City Council requires that water-cooled air conditioning units of 1 ton or more capacity must be equipped with water conservation devices.

Owners of systems which can be provided with water savers without structural or mechanical alterations must comply with the new law by July 15, according to H. C. McClintock, city manager. Others have until Aug. 15 to conform.

New systems must be approved by the city building commissioner.

The ordinance establishes a use limit of 10 gals. of water per hour for each ton of refrigeration.

Violators of the law can be fined $50 for each day of illegal operation. Also, the city can discontinue water service.

AGA Names Stackpole Managing Director

NEW YORK CITY—Chester S. Stackpole, general sales manager, Heating & Cooling Div., Union Asbestos & Rubber Co., Chicago, has been appointed managing director of the American Gas Association, it was announced recently by F. M. Banks, AGA president.

He will join the association June 1 and will succeed H. Carl Wolf, who resigned earlier this year because of illness.

Before becoming associated with Union Asbestos & Rubber Co., where he helped in establishing a new division, Stackpole served as vice president, in charge of domestic sales, advertising, sales promotional and service activities of Williams Div., Eureka Williams Corp., Bloomington, Ill.

For three years previous to joining Eureka Williams in November, 1951, he served as vice president and general sales manager, Airtemp Div., Chrysler Corp., Dayton, and also as vice president, Airtemp Construction Corp.

MARSH
Instruments
THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.
PRESSURE GAUGES and Dial Thermometers for all services.
MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.
MARSH INSTRUMENT COMPANY
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Dept. D., Skokie, Ill

'Foodarama' Sparks Kelvinator Sales Gain; April Billings 47% Over Same Month of '54

DETROIT—Kelvinator appliance sales, sparked by the new "Foodarama," are well ahead of last year's pace and still gaining, Walter Jeffrey, vice president in charge of sales, has announced.

Jeffrey said April billings to dealers for all Kelvinator appliances were 47.2% above April a year ago, and for the first 10 days of May are running 62% ahead of the same period last year.

"While laundry equipment remains the big gainer among individual products for the seven months ended April 30, showing a 59% increase over 1954, refrigerators have made exceptional gains in recent weeks," Jeffrey pointed out.

"During April, refrigerators were 63% ahead, and this figure climbed to 69% the first 10 days of May. Laundry equipment showed a gain of 48% for April over April, 1954, increasing to a 65% gain of last year for May 1-10."

Jeffrey said other leading products were ranges, 38% ahead for April, jumping to 56% ahead for May 1-10, and room air conditioners—47% ahead of May a year ago.

The "Foodarama," Kelvinator's upright freezer and moist-cold refrigerator combined in a single two-door cabinet, began reaching retail floors in April. During the month it accounted for 9% of all refrigerator billings, but has now spurted to 15%.

To Cool New Atlanta Motel

ATLANTA — Heart of Atlanta Motel, Inc. has announced that a 100-room million-dollar motel will be started in the early fall on Courtland St., N.E. It will be air conditioned.

DAVY CROCKETT play tents will be used by Norge dealers this summer to push the sale of appliances. Some dealers are offering the tent and an appliance as a package for as little as $25 down. Discussing the tent are R. C. Connell, Norge vice president of sales, left, and M. B. Lasky and Gene Straus, president and general sales manager, respectively, of Mayflower Sales Co., Norge distributor in St. Louis

Davey Crockett Tents Promote Norge Sales

CHICAGO—Davy Crockett has entered the appliance business.

New play tents decorated with pictures of the "King of the Old Frontier" will be offered with the purchase of Norge appliances this summer.

R. C. Connell, vice president of sales of Norge, a subsidiary of Borg-Warner Corp., said that some 50,000 tents will be set up in backyards in the next few months.

"Dealers in all parts of the country have placed heavy orders. It's one of the hottest promotion specials we've ever had," he said.

He explained that many dealers are offering the play tent and an appliance as a package for as little as $25 down.

Clip and Save for Ready Reference

FAST FACTS ABOUT genetron® Super-Dry Refrigerants

"Genetron" *Super-Dry* Refrigerants are made by General Chemical Division, Allied Chemical & Dye Corporation, one of America's great producers of industrial and scientific chemicals for more than 50 years. Long a leader in fluorine chemistry, General has the mines, resources, reserves, experience and production facilities that make it a reliable source of fluorinated hydrocarbon refrigerants.

Careful control in the manufacture of "Genetron" refrigerants guarantees products of the highest quality, extremely low in moisture and other impurities. "Genetron" Refrigerants are identical and interchangeable in all respects with comparable fluorinated hydrocarbon refrigerants produced by any other manufacturer meeting the same high quality refrigerant standards and specifications. They have been tested exhaustively by major manufacturers and are being used in their air conditioning and refrigeration equipment.

- Guaranteed: Exceptionally low moisture content
- Non-corrosive to standard equipment materials
- Non-toxic, non-flammable, stable, safe
- Critical and freezing points well outside range of operating uses
- Solvent action on oil helps prevent solidification or congealing of lubricant
- Miscible with oil; aid in lubrication of equipment

genetron 11 ORANGE LABEL — Trichloromonofluoromethane
genetron 12 WHITE LABEL — Dichlorodifluoromethane
genetron 141 GREEN LABEL — Monochlorodifluoromethane

Selected Physical Data

	CCl_3F	CCl_2F_2	$CHClF_2$
Chemical Formula			
Molecular Weight	137.4	120.9	86.5
Boiling Pt. (°F) at 1 Atmosphere Pressure	74.7	−21.6	−41.4
Evaporator Pressure at 5°F (p.s.i. absolute)	2.93	26.52	43.02
Condensing Pressure at 86°F (p.s.i. absolute)	18.3	108.0	174.5
Freezing Point (°F) at 1 Atmosphere Pressure	−168.0	−247.0	−256.0
Critical Temperature (°F)	388.4	232.7	204.8
Critical Pressure (p.s.i. absolute)	635	582	716
*Compressor Discharge Temperature (°F)	113	102	131
Compression Ratio (86°F/5°F)	6.24	4.08	4.06
Liquid Viscosity at 5°F (centipoises)	0.650	0.328	0.286
Liquid Viscosity at 86°F (centipoises)	0.405	0.251	0.229
Vapor Viscosity at 1 atm. and 5°F (centipoises)	0.0096	0.0114	0.0114
Vapor Viscosity at 1 atm. and 86°F (centipoises)	0.0111	0.0127	0.0131
Saturated Liquid Density at 5°F (lbs./cu. ft.)	97.88	90.00	83.34
Saturated Liquid Density at 86°F (lbs./cu. ft.)	91.38	80.63	73.36
Saturated Vapor Density at 5°F (lbs./cu. ft.)	0.0815	0.6735	0.8034
Saturated Vapor Density at 86°F (lbs./cu. ft.)	0.4461	2.569	3.213
Specific Volume of Vapor at 5°F (cu. ft./lb.)	12.27	1.485	1.246
Latent Heat of Vaporization at 5°F (B.t.u./lb.)	84.0	69.5	93.5
Net Refrigeration Effect of Liquid 86°F/5°F (B.t.u./lb.)	67.5	51.1	69.3
Specific Heat of Liquid at 86°F (B.t.u./lb. °F)	0.209	0.243	0.335
Specific Heat of Vapor at Constant Pressure of 1 atm. and 86°F (B.t.u./lb. °F)	0.13	0.14	0.15
Specific Heat Ratio at 86°F at 1 atm. (k = Cp/Cv)	1.14	1.14	1.18
*Coefficient of Performance	5.00	4.69	4.65
*Horsepower/Ton Refrigeration	0.943	1.005	1.016
*Refrigerant Circulated/Ton Refrig. (lbs./min.)	2.96	3.91	2.89
*Liquid Circulated/Ton Refrig. (cu.in./min.)	56.0	83.8	68.1
*Compressor Displacement/Ton Refrig. (c.f.m.)	36.3	5.81	3.60
Thermal Conductivity of Liquid at 86°F (B.t.u./hr./sq.ft./°F/ft.)	0.0609	0.0492	0.0595
Thermal Conductivity of Liquid at 32°F (B.t.u./hr./sq.ft./°F/ft.)	0.0680	0.0559	0.0704
Thermal Conductivity of Vapor at 86°F (B.t.u./hr./sq.ft./°F/ft.)	0.0048	0.0056	0.0068
Thermal Conductivity of Vapor at 32°F (B.t.u./hr./sq.ft./°F/ft.)	0.0045	0.0048	0.0060
Toxicity (Underwriters' Laboratories Group No.)	5	6	5A
Flammability & Explosivity	none	none	none
Relative Dielectric Strength of Vapor (compared with Ethyl Chloride as Unity)	3.00	2.40	1.31
Odor	Ethereal	Ethereal	Ethereal
Type of Compressor in Which Usually Used	Rotary & Centrifugal	Reciprocating & Rotary	Reciprocating
Evaporator Temperature Range	30 to 50°F	0 to 50°F	−130°F to 0°F
Solubility of Water in Liquid Refrigerant at 32°F (gm./100 gm. Refrigerant)	0.0036	0.0026	0.060
Solubility of Water in Liquid Refrigerant at 86°F (gm./100 gm. Refrigerant)	0.013	0.012	0.15
Oil Solubility (Miscibility with Lubricating Oils)	yes	yes	yes**

*Based on 5°F Evaporator Temperature and 86°F Condenser Temperature.
**Separates into two phases at lower temperatures.

FREE! VALUABLE NEW FOLDERS! Write today for important new informative folders, "Genetron" Super-Dry Refrigerants for Air Conditioning and "Genetron" Super-Dry Refrigerants for Refrigeration.

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40 Rector Street, New York 6, N. Y.
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RESULTS in MINUTES ...NOT HOURS!

Thawzone starts to eliminate moisture as soon as it mixes with the refrigerant. Time is not lost waiting for the refrigerant to pass through a cartridge many times. You are able to put the unit back into operation promptly without further freeze-ups.

1. Thawzone reaches all parts of the unit. 2. Actually destroys moisture . . . not a mere antifreeze. 3. A patented invention . . . cannot be copied. 4. No pressure drop possible. 5. Not subject to oil clogging. 6. Neutralizes acids and prevents corrosion. 7. Costs less. Only about 8¢ per lb. of refrigerant treated. 8. One product for all "Freon" and methyl units. 9. Only ⅛ oz. per lb. of refrigerant required. See your wholesaler or write Highside Chemicals Co., 18 Colfax Ave., Clifton, N. J.

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THREE 20-TON
Frigidaire
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GOOD CONDITION MUST SELL IMMEDIATELY

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ARI Meets In Hot Springs--

(Concluded from Page 1, Col. 5)

tions, who will speak on the subject "The Crossroads of Labor Relations."

Program furnished by ARI is as follows:

SATURDAY, JUNE 4

10:00 a.m. Budget Committee
Executive Committee
(Joint Meeting)

SUNDAY, JUNE 5

9:00 a.m. Registration
10:00 a.m. Board of Directors Meeting.

MONDAY, JUNE 6

8:30 a.m. Registration
9:30 a.m. **Product Section Meetings:**
Air-Conditioning & Refrigeration Systems Section
Flow Control Valves Section
Refrigerants, Lubricating Oils, and Chemicals Section
Room Air Conditioner Section
Tubular Products Section
2:15 p.m. Cooling Tower Section
Credit Committee
Refrigerant Driers Committee
6:30 p.m.—Social Hour

TUESDAY, JUNE 7

8:30 a.m. Registration
9:30 a.m. **Product Section Meetings:**
Heat Transfer Section
Self-Contained Ice-Maker Section
Small Compressor Section
Temperature Controls Section
Valves, Driers, Fittings and Accessories Section
12:00 Noon Annual Golf Tournament

WEDNESDAY, JUNE 8

9:30 a.m. Annual Meeting

Restaurant Show--

(Concluded from Page 1, Col. 3)

Several manufacturers showed air conditioners, a few displayed walk-in boxes, and one demonstrated a wall-mounted freezer for storing and dispensing prepared frozen foods.

The Decorating and Furnishings Center, a new feature of the show, drew an enthusiastic reception from the restaurateurs. The four completely appointed model dining rooms, however, contained no air conditioning or refrigeration equipment.

Room Unit Selling, Adv. Standards--

(Concluded from Page 1, Col. 3)

Jones, Jr., and NBBB Executive Vice President Allan E. Backman made the following joint statement:

"The intent of these standards is to encourage and preserve dependability in advertising and selling room air conditioners.

"It is also hoped that these standards will have a stabilizing influence on the advertising and selling practices at the local level, where they may be supplemented to meet local requirements.

TO BUILD PUBLIC CONFIDENCE

"These standards should help build consumer confidence in the room air conditioner industry, thereby helping to protect the investment of dealers, distributors, and manufacturers in the productivity of room air conditioner advertising."

The cooling capacity provision will apply to advertising or sales literature for all 1956 models, or later. In the meantime, any statement of cooling capacity expressed in terms of the B.t.u.-per-hour capacity of a unit shall be according to its rating based on the ARI Standard.

The recommended standards define a room air conditioner as including "a prime source of refrigeration and dehumidification and means for circulating and cleaning air" although it may also include means for ventilating, heating, or performing other functions.

Air coolers, air purifiers, air humidifiers and dehumidifiers, and air circulators, such as fans and blowers, as well as any other device not performing the four minimum functions of an air conditioner, shall be described for what they are and shall not be described as air conditioners according to the standards.

Recognizing the wide variation in construction, insulation, temperature, and other controlling factors, the standards provide that advertising claims as to area cooling capacity shall be appropriately qualified to avoid deception of the public.

Other standards require adequate disclosures in the advertising of discontinued models or of units which are used, rebuilt, reconditioned, etc.

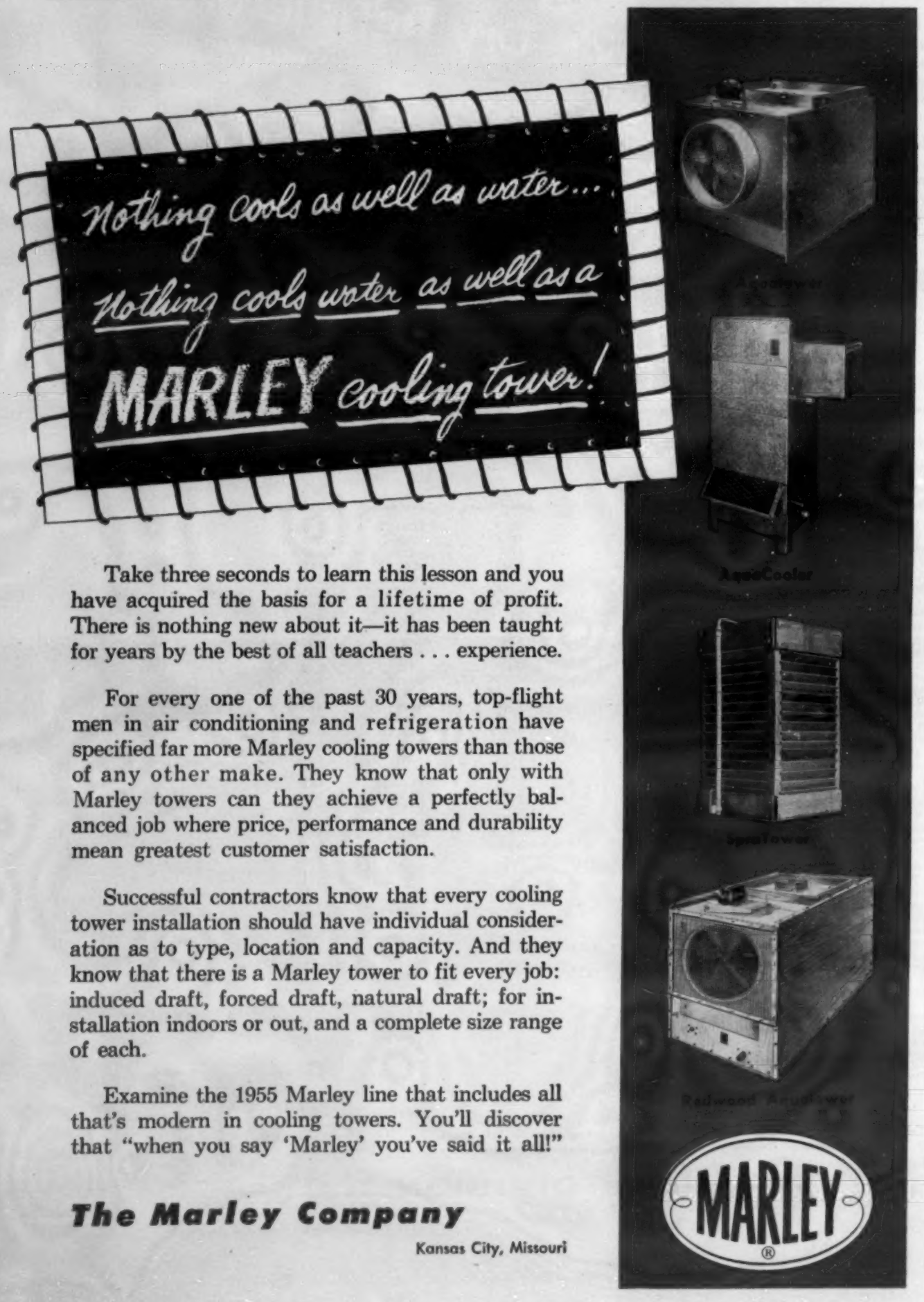
Misleading use of illustrations or layouts is prohibited. Guarantee statements must be accurate and disclose material conditions or limitations, if any.

INSTALLATION CLAIMS COVERED

The standards provide that no advertisement of a room air conditioner shall state or imply that the unit can be installed without alterations in present electrical circuits or wiring, or without additional expense for electrical installation, when such is not the fact.

The standards also provide that deceptive trade-in allowances, fictitious list prices, false and exaggerated comparative prices or savings claims, misleading "free" offers, unfounded superlatives, misleading "rental" offers, "bait" advertising, general underselling claims, and unfair disparagement of competition shall not be employed.

The recommended standards are intended to apply equally to advertisements in newspapers, magazines, radio broadcasting, telecasting, direct mail, window displays, counter cards, and advertising promotion in any form used or prepared for use of others by national advertisers and national or regional distributors of room air conditioners.



Take three seconds to learn this lesson and you have acquired the basis for a lifetime of profit. There is nothing new about it—it has been taught for years by the best of all teachers . . . experience.

For every one of the past 30 years, top-flight men in air conditioning and refrigeration have specified far more Marley cooling towers than those of any other make. They know that only with Marley towers can they achieve a perfectly balanced job where price, performance and durability mean greatest customer satisfaction.

Successful contractors know that every cooling tower installation should have individual consideration as to type, location and capacity. And they know that there is a Marley tower to fit every job: induced draft, forced draft, natural draft; for installation indoors or out, and a complete size range of each.

Examine the 1955 Marley line that includes all that's modern in cooling towers. You'll discover that "when you say 'Marley' you've said it all!"

The Marley Company

Kansas City, Missouri

Mechanical Contractors Meet--

(Concluded from Page 1, Col. 5)

Murphy said, by the established labor, contracting, and manufacturing groups.

Many newcomers to the mechanical trades are threatening to take a larger portion of the heating, piping, air conditioning, and plumbing volume away from those contractors who have pioneered and contributed much to the industry.

PROFITLESS PROSPERITY

"Profitless prosperity in today's high level of competition is partly due to the negligence of the specialty contractors who have allowed themselves to be merely subcontractors," Murphy asserted.

"We have allowed the general contractors to take over our business, tell us how to do the job, and use our money to do it," he said.

In Canada, members of the National Association of Master Plumbers & Heating Contractors have taken steps to eliminate bid peddling by asking members of the association not to submit bids to general contractors, according to Robert Davidson, general manager.

Presumably bids are submitted to the architects.

AIR CONDITIONING PANEL

One of the most popular discussions was a two-hour panel on air conditioning and refrigeration, attended by over 100.

D. A. Forberg, of the Air Comfort Co., Chicago, discussed self-contained units for air conditioning applications.

Multi-zone air conditioning systems for office buildings were the subject of a talk by W. O. Hoffman, of Buensod-Stacey, Inc.

A discussion of the heat pump was sparked by a talk by W. S. Miller of the York Corp.

Gifford Appointed--

(Concluded from Page 1, Col. 4)

with Schick in various executive capacities since 1940 except for a two-year period when he was vice president and director of Swank, Inc.

During World War II, Gifford served with the U. S. Army Signal Corps in the European theater.

Admiral Leases Space In Merchandise Mart

CHICAGO — Admiral Corp. has signed a long-term lease for more than 5,700 sq. ft. of display space on the 11th floor of the Merchandise Mart, Wallace O. Ollman, Mart general manager, and W. C. Johnson, Admiral vice president-sales, jointly announced recently.

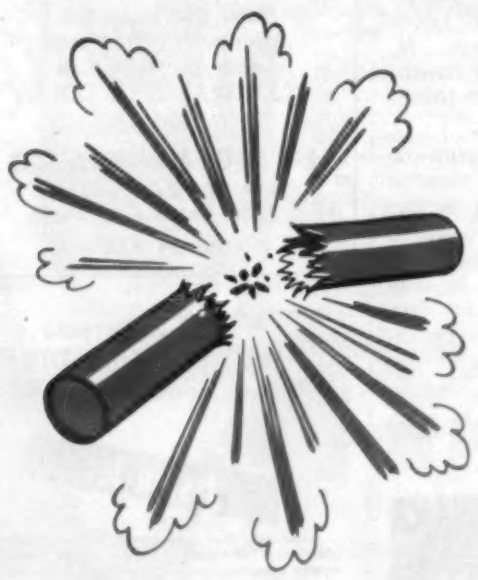
Admiral will use its Mart location as permanent showroom headquarters for displaying its complete lines.

The company will open its new headquarters in the Merchandise Mart in June, 1956.

"A CASE OF COOL JUDGMENT"

FLO-COLD DRINKMASTER
STAINLESS STEEL CUBER — COOLER.
SOLD THRU DEALERS ONLY
WRITE
United Friguator Engrs.
MENOMINEE, MICH.
AVAILABLE IN SIZES 4 TO 10 FT.

WE SHOWED THEM OUR NEW STREAMLINED LOOK . . . EVERYBODY LIKES IT!



IT STARTS ON
The Fourth of July

THERE'LL BE SOME CHANGES in your all-industry newspaper. Readers and advertisers who've seen them are definitely enthusiastic. They agree: we're streamlining for more action!

Faster News Service

Improvements in production will bring you the latest news of the industry even faster than before. You'll always be strictly up-to-date with America's fastest growing industry.

Easier to Handle

Your NEWS will have a new streamlined page size*—slightly smaller. It will be easier to handle when reading. And advertisers will be able to use full pages at lower cost.

Streamlined Editorial Style

More information in less words is the theme of the new editorial style. You'll be able to select the news that's important to you faster, too! With fewer articles on each page, it will be easier and faster to spot what's important to you.

The Only All-Industry Publication

But *not changed* is the NEWS' vigorous leadership in the air conditioning and refrigeration industry. As always, it's first choice. The NEWS has more paid subscribers than any other publication in the field. Your newspaper carries twice as much advertising as any other publication in air conditioning and refrigeration. It has the largest editorial staff, which means more news and better information for you. It's the Industry's only weekly newspaper.

You'll like the new streamlined look starting on July 4th.

**SPECIFICATIONS*:*

Trim size—11" x 15⅜".
Type page size—10¼" x 14".
5 columns to a page.
Column width—2".
Column depth—14".

AIR CONDITIONING & REFRIGERATION **NEWS**
The Newspaper of the Industry

450 WEST FORT STREET • DETROIT 26, MICHIGAN

The Newspaper That Keeps You Up-To-Date with America's Fastest Growing Industry.

ABP ABC AUDITED PAID CIRCULATION

Mitchell Sponsors 15-Minute TV Program Honoring Dealer for Role In Community

CHICAGO—Designed to better acquaint the American public with the vital role played in his community by the appliance dealer, a 15-minute non-commercial television program is being sponsored and financed by The Mitchell Mfg. Co.

The program is soon to be shown in 200 cities across the country.

Spoken by A. W. Bernsohn, managing director of the National Appliance & Radio-TV Dealers Association, these words on behalf of the appliance dealer are part of the program:

"We give people the picture and sound of far-off events simultaneous with their happening. We give them music in every room of the house and wherever they go. We cool the air for them, heat it, dry it, filter it, humidify it, or just blow it around the way it is. We chill their food for days—or freeze it for months. We grind their garbage and dry their hair."

"The appliance dealer of America plays a tremendous role in bringing us a better way of life," E. A. Tracey, Mitchell general manager, said in announcing the plan. "This is our method of honoring him."

The program will consist of two parts. Approximately 10 minutes will be devoted to a film dramatizing the daily part the appliance dealer plays in his community.

Remainder of the program will be given to presenting civic recognition awards to individual appliance dealers who have performed outstanding services in their communities.

In addition to Bernsohn's short talk, the film pictures a typical appliance dealer in an average community. It shows how, by introducing his fellow citizens to appliances, he helps them achieve a more comfortable way of life.

Actual location shots demonstrate real-life instances of how appliances remove the drudgery from housework, enable a householder to improve his home, and eliminate for a family the discomfort of hot weather.

Tracey pointed out that the program contains no commercial mention of Mitchell or any other specific products.

The film was produced by Kling Studios, Chicago.

Room Cooler Cover Firm Moves

DALLAS—Carroll Bros. Canvas Products Co., manufacturer of room air conditioner covers and other canvas products, has moved to its new location at 337 Cole, in the Trinity Industrial District.

200 Amp. Meter Socket Required on New Homes Built In Spokane, Wash.

SPOKANE, Wash.—This city's electric code has been amended to require a 200-ampere meter socket and one and one-half minimum, or larger, rigid conduit to accommodate service entrance wires.

The action was taken after it was discovered that many new homes in the area were inadequately wired and thus unable to use several of today's appliances. Spokane is believed to be the first city to take such action.

Pointing out that the Inland Empire is served by the Washington Water Power Co., Frank Tool, manager of the Inland Empire Electric League, said the average residential customer of the privately-owned utility last year used just under 7,000 kilowatt hours of electricity as compared to a national average of about 2,500 kwh.

"This meant," he stated, "that the 100-ampere service entrance recommended nationally was already obsolete in the area."

He said that in the first six months of 1954, Inland Empire electrical dealers lost more than $84,000 in potential sales or returned dryers alone due to inadequate wiring and insufficient service entrance capacity in customers' homes.

ROOM AIR CONDITIONERS

WORKMAN FITS Tywel-made sleeve casing into a wall opening in apartment house, now under construction. Tywel built-in wall air conditioning unit fits easily into sleeve. Cover, right, fits snugly over unit, making completed installation look like a radiator grille. Feature of the Tywel air conditioning unit is its virtually flush-to-wall installation, with practically no overhang outside. Individually controlled unit will be offered to tenant on an optional basis, with landlord charging rent accordingly. If tenant doesn't want air conditioning, a metal plate will be installed inside sleeve casing to keep out cold.

Builders Can Offer Air Conditioning As Optional In Homes, Apartments With Tywel Built-In Wall Units

BROOKLYN—Alex Lewyt, president of Tywel Mfg. Corp. here, maker of built-in wall air conditioning units, said recently that some of the biggest private home and apartment house builders in the metropolitan area are now offering tenants and home-buyers air conditioning on an optional basis, basing rents and home prices accordingly.

The optional arrangements for built-in Tywel air conditioning in private dwellings are available in the Birchwood Park development of 2,600 homes, now under way by Sosnow & Schwartz at Manetto Hills on Long Island. Milton Saper, constructing 1,200 homes in East Islip, L. I., is another builder using Tywel units.

Other private home builders include the development known at Stratford at Roslyn; the Gutterman Homes in Forest Hills; Irving Warfield's development in Great Neck; and A. C. Brand's Golf Club Estates in Rockville Centre.

Still others include Emanuel Prince, B. Jackowitz, V. J. LoBello, Mark Leanza, Leon Levy, Abby Levine, Morton Crane, Ernest Alson, Bruce Electric Co., O'Brien & Kinkel, William A. Schwarz & Son, S. Nurkin, Coleman Electric, P. M. Yampol, Josephe Rosenblatt, and Webster C. Moulton.

Several big builders of apartment houses, including George Rabinor, Kessler and Whol, Louis Bernstein, Simon Brothers, M. Blumberg, and the Chizner Brothers, will offer Tywel air conditioning on an optional basis.

"Investment on the part of apartment house builders runs to about $25 a room, which is the cost of a sleeve casing into which a built-in wall air conditioner unit may be placed easily," it was stated. "The sleeve casing fits into a wall opening and the air conditioner may be installed if the tenant wants it.

"Tenants may sign leases with or without air conditioning. If a tenant doesn't want air conditioning, the sleeve casing remains in the wall opening with a sealing plate installed inside to shut out cold temperatures. Inside the room, the unit looks like a radiator grille, fitting virtually flush into the wall.

"Private home builders have even a smaller investment. They install the sleeve casings in as many rooms as they wish in model homes; then build according to a home-buyer's order."

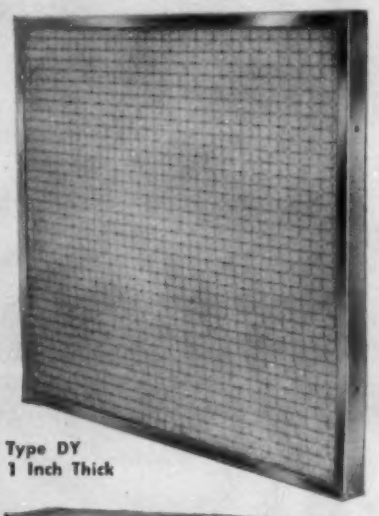
Fedders Names Marshall Midwest Sales Manager

BUFFALO—Joseph H. Marshall has been appointed midwest regional sales manager for the Fedders-Quigan Corp., according to Robert E. Cassatt, general sales manager.

Marshall's headquarters will be in Chicago. He was formerly general store manager for Polk Brothers, Chicago appliance firm. His association with Polk Brothers extended over a seven-year period.

Previously Marshall was associated with the Illinois Bell Telephone Co. in a public relations capacity.

ANOTHER INSTANCE OF
CONTINENTAL LEADERSHIP:
NEW...BETTER...
DYCON®
SUCCESSOR TO THE THROWAWAY FILTER!
for AIR CONDITIONERS
and AIR HANDLING UNITS



Type DY
1 Inch Thick

CA-20
4 Inches Deep

CA-24
8 Inches Deep

DYCON HELPS YOU 2 WAYS:

1. *More profit for you.* Higher list price—with *full* mark-up—assures you larger dollar volume and better margin.
2. *Better-satisfied customers.* DYCON improves performance of unit by eliminating blocked-filter problems.

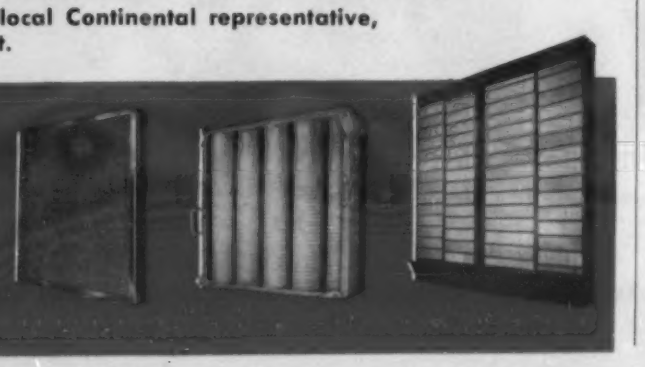
HERE'S WHY:

Efficient new plastic dry-type media traps dirt by accumulated static charge . . . quickly and easily rinsed clean with cold running water—and immediately ready to be re-used good as new. Sturdy aluminum frame. All standard sizes. As simple as that:

Just RINSE and REUSE

Contact your local Continental representative, or write direct.

AIR CONTINENTAL FILTERS
P.O. BOX 1647 LOUISVILLE 1, KY.
CONTINENTAL AIR FILTERS Inc.



PRESSTITE MASTIC SEALERS

- Seal seams
- Deaden sound
- Bulk, bead, tape or semi-liquid
- Apply by hand, spray or flow

See your wholesaler or WRITE

PRESSTITE ENGINEERING CO.
3774 CHOUTEAU AVE. • ST. LOUIS 10, MO.

ONE MAN can walk an Air Conditioner UPSTAIRS ALONE and put it in the window without help with the new L-S STAIRWALKING DOLLY
write
L-S HTG. & ENGRG. CO.
910 W. Lycoming St.
Philadelphia 40, Pa.
Territories Available

Increase COOLING TOWER EFFICIENCY With ASPIR-JET

Aspir-Jet, the new spray nozzle, increases efficiency of cooling towers by increasing water break-up and improving water distribution. This is accomplished by the Aspir-Jet unique design which atomizes the water with as little as one-half pound nozzle pressure.

Formed of butyrate plastic, Aspir-Jets last longer because they do not corrode. Thousands already in use are giving better cooling even with lower than normal pressures.

• Available through Refrigeration and Air Conditioning Wholesalers.

Manufacturers & Refrigeration Wholesalers: if you are not now using or stocking this astounding new product, wire or write

THERMAL AGENCY
National Sales Agents
1515 DALLAS • HOUSTON, TEXAS

Glass, Stainless Steel 19-Story Building To Be Air Conditioned

NEW YORK CITY—Air conditioning will be a feature of Inland Steel Co.'s new headquarters tower in the Chicago Loop, a 19-story glass and stainless steel structure described by *Architectural Forum* magazine as "one of the most outstanding modern office buildings."

"Because of air conditioning," the publication points out in its May issue, "fixed heat absorbent double windows will be used, extending all the way to the ceiling from a sill only 3 in. above the floor. There will also be guard rails about waist high, however."

Air conditioning, heating, and electrical lines will be carried in the 4-ft. space between each acoustical-steel hung ceiling and the floor above, the magazine says.

Describing several unique features of the structure, the magazine notes that for one thing, the entire weight of the building will be carried on only 14 exterior columns.

"There will be no interior columns," it is noted. "Instead each floor will have almost 10,000 sq. ft. of completely clear, flexible floor space and the longest clear spans of any tall building.

"Another unusual feature will be a separate windowless tower that will house the elevators, wash rooms, and all utilities for the building. This will stand about 10 ft. to one side of the long rectangular main portion of the building and will make possible the latter's expansive clear floors."

Chicago Grocer Co-op Will Buy, Sell, and Finance Fixtures for Members

CHICAGO—Formation of Centrella Fixture & Finance Corp. to buy and sell store fixtures and finance expansion and remodeling of member stores was disclosed recently by Central Cooperative, Inc., retailer-owned cooperative.

It is believed that Central is the first retailer-owned cooperative in this city to offer its members fixture and financing service as well as store engineering and architectural services through a separate corporation.

Officers of the new corporation are William Cassin, president; Robert F. Brown, vice president; H. G. Jasker, treasurer; and Leonard Olson, secretary.

Cassin, Jasker, and Olson hold the same positions in Central Grocers Cooperative. Brown, an architect, was formerly store engineer for the National Association of Retail Grocers.

Pacific Metals Distributes Coldmobile on West Coast

SAN FRANCISCO — The Coldmobile Div., Union Asbestos & Rubber Co., has recently signed an agreement with Pacific Metals Co. here for Pacific to act as distributor for Unarco's transportation refrigeration line, Joe A. Sever, Coldmobile district representative, has announced.

The refrigeration and air conditioning division of Pacific Metals is managed by Byron Watters.

Allied Refrigeration Represents Drayer-Hanson

LOS ANGELES — Appointment of Allied Refrigeration Suppliers, Inc. as representative for Drayer-Hanson refrigeration and air conditioning equipment in two southern California counties, a portion of lower California, and in the state of Arizona was announced recently by Drayer-Hanson, Inc.

Roland W. Nicol is president and Ray J. Moran general manager of Allied Refrigeration Suppliers. Main office is in San Diego with a branch at El Centro.

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

Is life, then, a dream and delusion, and where shall the dreamer awake?
Is the world seen like shadows on water, and what if the mirror break?
Shall it pass a camp that is struck, as a tent that is gathered and gone
From the sands that were lamplit at eve, and at morning are lovely and lone?

—SIR ALFRED LYALL

Delightful Hobby

Dr. V. Edward Kinsey of Grosse Pointe, Mich., has had a lot of fun since a different Dr. Kinsey published his famous reports on you-know-what.

Whenever he is introduced to a young woman as "Dr. Kinsey" he whips out a notebook. Frequently that girl crimsons and flees.

This "other" Dr. Kinsey claims he doesn't try that gag on older women any more. They all seem too eager to talk.

Grandson Outfoxes Grampaw

Fond grandpa Judge W. McKay Skillman baby-sat with Billy, his pre-kindergarten grandson.

Trying to entertain the urchin, august Judge Skillman told stories, recited nursery rhymes, and even croaked a couple of songs.

Billy remained wide-eyedly awake.

"Having a good time, Grandpa?" he cherubed, brightly.

The Friendly Way

Abe Lincoln was criticized for his generous attitude toward supposed enemies.

"Why do you try to make friends of them?" asked an associate. "You know they are traitors to your cause."

"Am I not destroying my enemies," Lincoln gently replied, "when I make them my friends? And a TRUE friend is *never* a traitor to you."

Staff Memo

GFT: You may find these company names amusing. GMH & JOS.

Hindu Incense Mfg. Co., Chicago.

Fearless Dishwasher Co., Rochester.

Kurly Kate Corp., Chicago.

Fuller Uniform Co., Dallas.

Hot Tossie, Inc., Chicago.

Mood Enterprises, Columbus.

Pausing Thought

Sometimes you get the feeling that this country's continued prosperity is sort of like tying a bow tie—you go along fine as long as you don't stop and think how you're doing it.—*Detroit News.*

Add Stupid Jokes

Q.: Can you use the word "bewitches" in a screwball sentence?

A.: "Youse guys go on ahead. I'll bewitches in a moment."

Read Twice

"What do you see in Joe? He's just an every-day fellow."

"So who's complaining?"

Modest Genius

For years and years we've enjoyed the tiny house organ published by the Dictaphone Corp. Obviously it is a one-man job, and equally obviously its anonymous editor-writer is a warmly human personality. In his latest issue he reveals:

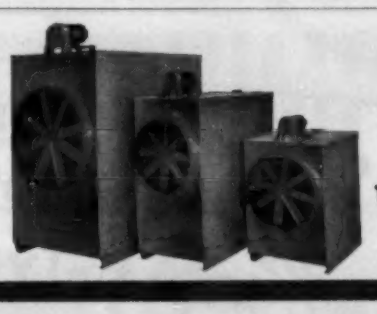
"During 1954 we became the author-composer of three popular song hits which no doubt your kids know: "OH BABY MINE," "I GET SO LONELY," and "MR. SANDMAN," which Archie Bleyer and the Chordettes successfully recorded."

How modest can you get?

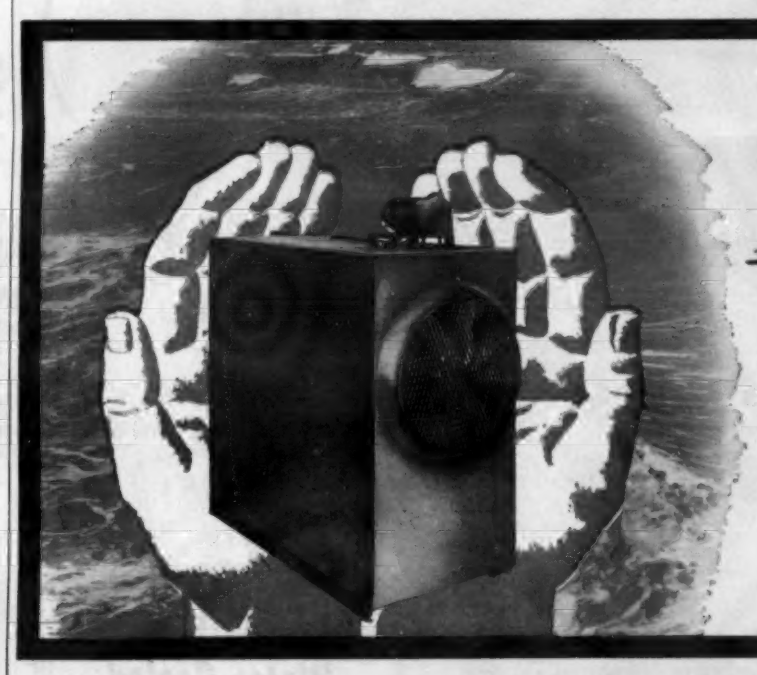
Please, Mr. Dictaphone, tell us who you are. We love you.

"For compressor shutdown defrosting
I buy PARAGON 3400 SERIES
time switches because they give me . . .
more years of trouble-free service!"
Smart business? You bet! What's more important than cutting service call-backs or reducing food spoilage? Key to the 3400 series continuous, uninterrupted service is its industrial-type, 4-watt motor. This heavy-duty motor — exclusive with Paragon — has a minimum life expectancy of 5 to 7½ years — many last 12 years or longer!
Add to this the many patented construction and operation features found in all Paragon time switches. You'll see why the Paragon 3400 series is your BEST BUY for all types of commercial refrigeration defrosting and air conditioning applications. Available in 120-V, 60 cycle and 240-V, 60 cycle; 30 Amps. 1 HP types.
Order the new 3400 series
from your Refrigeration Equipment Wholesaler, or write Dept. 1687 for bulletin.
Also write for complete facts on these famous Paragon timers
Commercial Defroster
Dehumidistat Timer
7-Day Calendar Dial Time Switch
Fan Timers
PARAGON ELECTRIC COMPANY
TWO RIVERS, WISCONSIN
WORLD'S FOREMOST MANUFACTURER OF TIME CONTROLS

HALSTEAD & MITCHELL
COOLING TOWERS



2 thru 120 TONS



Protected Steel
adds new years of life!

Steel in cooling towers undergoes constant corrosive attack by both water and water-treatment chemicals. Halstead & Mitchell combats this rusting . . . adds years to cooling tower life . . . by Protected Steel, a new concept in steel protection. Protected Steel is not simply a treatment, but a whole new approach to the problem of steel subjected to constant exposure to water. Halstead & Mitchell provides this added value in cooling tower construction . . . to give you added protection.

TRIPLE-THREAT PROTECTION

Not one, but three individual finishes coat every Halstead & Mitchell sheet steel cabinet. Vinsynite phosphates the metal, providing *maximum* protection against corrosion. Vinyl Zinc adheres tightly to the Vinsynite . . . is tough, flexible, inert . . . and provides high resistance to moisture vapor. Chlorinated rubber . . . tough and water resistant . . . provides film thickness, of vital importance in combating water immersion and high humidity. Applied *hydraulically* to force these protections into every conceivable opening, they provide the most satisfactory cooling tower steel protection ever developed.

STAINLESS STEEL FANS, SHAFTS

Halstead & Mitchell cooling tower fans and shafts are Stainless Steel. Rust-proof, of course.

EVERDUR BOLTS

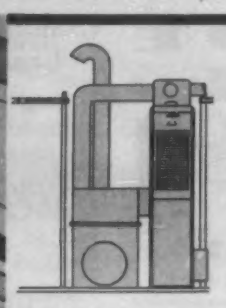
For ease of disassembly after years of operation, H & M uses Everdur Bolts in all cooling towers.

Want More Details? Then Write for Catalogs or Visit Your Nearest Leading Wholesaler

EXCLUSIVE 20-Year Guarantee!
on the wetted deck surface against rotting or fungus attack
Only Halstead & Mitchell pressure-creosotes all wood used in its cooling towers, to provide the most satisfactory protection known against rotting, fungus attack, and corrosives in cooling water. That's why you get the "20-Year Guarantee" only from H & M.

HM Halstead & Mitchell
BESSEMER BUILDING • PITTSBURGH 22, PA.

USES NO WATER...COOLS ENTIRE HOUSE!



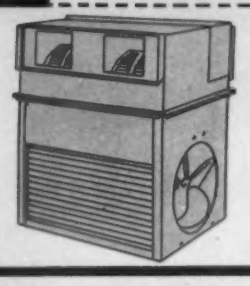
HOW TO COMBINE AIR CONDITIONING AND FORCED AIR HEATING SYSTEMS BY UTILIZING EXISTING HEATING DUCTS

FLOOR MODEL
2 h.p.
Compact unit requires no ducts, does an exceptional cooling job in the average home. Ready for easy installation.

Uses existing ducts. 5 times cooling capacity of most window units. Also available for roof or ceiling installation. Standard electrical connections. 5-year guarantee.

WRITE today for complete details.

GENERAL AIR CONDITIONING CORP.
Dept. AD, 4542 E. Dunham St., Los Angeles 23, Calif.
NATIONWIDE SALES AND SERVICE



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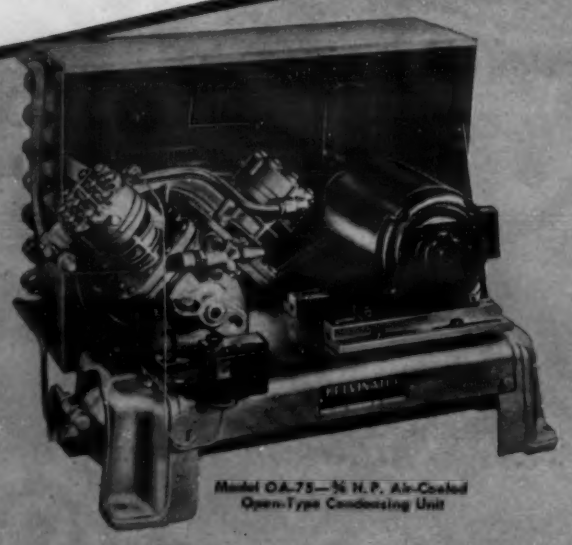

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EXTRA LARGE! Receivers

EXTRA CAPACITY! Water-Cooled Condensers

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Ways To Avoid Faulty Installation of Water Regulating Valves Told by Luscombe

DETROIT—Noting that much of the trouble charged to defective water regulating valves is actually due to faulty installation, R. H. Luscombe, general sales manager for Penn Controls, Inc., recently outlined for servicemen here, some of the points to watch for in making installations.

If water pressure is high—more than 80 p.s.i.—use a reducing regulator, he advised, to reduce wear on the valve.

Each valve, he said, is marked with an arrow to indicate the direction of water flow. Do not put the valve in backwards, because it won't work that way.

After the valve is installed on new pipe, wedge open the valve and flush out the line for about five minutes. This will remove much of the entrained solids and debris in the pipe and give the valve a chance to function normally. Debris, such as pieces of solder, thread shavings, and stones can make a new valve inoperative within a few hours, if they aren't flushed out first, he said.

Luscombe advised that where water or ambient temperature may reach 90° F., don't lower the opening point adjustment on the valve below the factory setting to increase the water flow. The factory setting is about as low as it is possible to go, he said.

If you put it much lower, the valve won't close at all and there will be a continuous flow of water through the valve. This will make the customer very unhappy when he gets his first water bill.

If you aren't getting enough water through the valve under normal adjustment, he said, it indicates that you need a larger valve.

Finally, he advised, support the capillary tube connections to prevent movement from vibration. Vibration crystalizes tubing and bellows, he warned.

Water regulating valves must be looked after, he commented. They can't be installed and forgotten. Among the things that can affect their operation are changes in water temperature, changes in water pressure, the chemistry of the water, hydraulic shock or water hammer, and normal wear and tear.

Connecting Electric Water Closets to Cooling Tower Reduces Corrosion, Liming

TAMPA, Fla.—A method of minimizing corrosion and liming in cooling towers and evaporative condensers through the use of an electric water closet has been developed by McPherson, Inc. here.

Hal McPherson, veteran industry engineer who heads the company bearing his name, describes the problem, and the solution offered by use of an electric water closet to solve it, in the following manner:

"In a typical cooling tower system all the water is recirculated and 1% is evaporated every pass. Thus every 100 minutes the hardness of the water is increased 100%. Dirt and fumes from the air are also added to the mixture.

"The re-circulating water becomes 'syrupy' after a few weeks and corrosion, liming, scaling, and sludge troubles arise.

"Liming is directly proportional to the concentration. Corrosion is proportional to the square of the concentration of some minerals and to the cube of others.

"The temperature climbs as the liming and sludge advances, resulting in progressively poorer thermal performance and accelerated corrosion.

"Obvious cure is to keep the water fresh—and as near the original hardness as possible by frequent 'blow-downs' or 'bleed off.'

"The handiest and most economical way to 'blow-down' is to flush the establishment's toilets with water from the cooling tower sump. Sludge is thus dumped at every toilet flush and made up with fresh water from the tower float valve.

"A high percentage of 'bleed-off' losses are saved."

When the pump runs constantly at high pressure the application is simple, McPherson says. But, if only low or gravity pressure is available certain difficulties are encountered.

A direct flush (Sloan-valved) water closet is not practical unless the tower sump is at least 58 ft. higher than the closet bowl, or 25 p.s.i. is available from the tower pump at all times. For a standard flushing tank closet, a minimum head of 38 ft. or a pressure of 15 p.s.i. is required.

Tank closets also give considerable trouble, as the hard water attacks the fragile mechanisms. Because of their large water usage, the required an over-size float valve on the tower. Pipe from the tower should be larger than flush valves.

For winter operation, a three-way cock would be needed as a service valve on the water closet, one inlet going to the cooling tower sump and another to city water supplies permitting use of the toilet when the water is shut off. Because of the wide difference between gravity flow and city water pressure, ordinary closet mechanisms would probably have to be adjusted or replaced in each change-over.

"From the foregoing," says McPherson, "it is evident that the necessary conditions for the ideal use of conventional types of water closets for 'blow-down' are rare.

"The electric water closet requiring almost no water pressure has been developed by McPherson, Inc. to solve these problems.

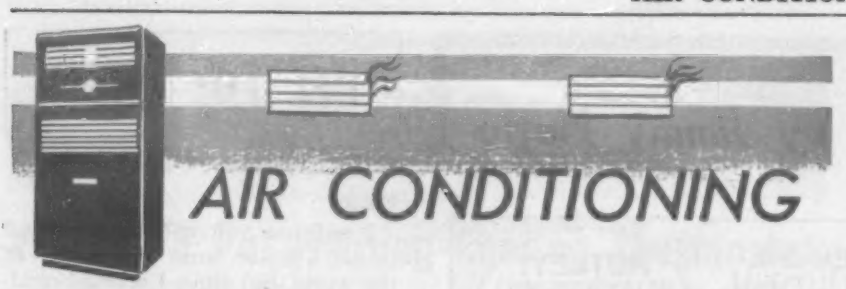
"The flush valve used with the electric water closet system is a stop valve which needs no adjustment on changing from tower to city water pressures.

"These electric water closets can pay for themselves within a short period of time—from savings on maintenance, water costs, and depreciation," McPherson declares.

Willhoft Represents Bush, Heat-X In West

W. HARTFORD, Conn. — Bush Mfg. Co. and Heat-X, Inc. have announced the appointment of Carl H. Willhoft as a sales engineer. Working through the companies' Riverside, Calif. plant, he will cover San Francisco, northern California, and Nevada.

Prior to joining the Bush, Heat-X organization, Willhoft was associated with California Refrigerator Co. for 15 years.



20 Points To Check In Surveying For Commercial Air Conditioning

DETROIT—Twenty points that the air conditioning salesman should check on when surveying for a sommercial installation were reviewed here recently for new Carrier air conditioning dealers.

The points are:

1. Dimensions of the space.
2. The compass directions.
3. Windows and doors. Are windows single, double, unshaded, or shaded by shades, awnings, or adjoining buildings at certain times of day.
4. Beams and columns.
5. Show cases, fixtures, and curtain walls.
6. Surrounding rooms. Are they cooled, normal temperature or hot, i.e. kitchen, bakery, furnace room, etc.
7. Proposed unit location. Has customer agreed to location? What is floor area and space required?
8. Delivery of unit. Where, how, and when is unit to enter building?
9. Note proposed location of supply air duct.
10. Outside air duct. Locate opening to outside, whether existing opening is available, size of opening, and whether it is necessary to cut through roof or wall, noting type and thickness of barrier.
11. Locate return air grille and duct.
12. Electrical service. Note electric panel location and distance to unit. Note current characteristics. Is voltage at normal or below normal rating? Is new service, new meter, fused disconnect switch, or fan motor transformer required?
13. Cold water service. Distance from nearest cold water supply line to unit, supply line size, and water pressure at the meter. Is new service, new meter, or water pressure reducing valve needed?
14. Drain for condenser water and drip pan. How far from the unit? What type is needed? Is drain low enough for gravity flow from drip pan? Is new drain or pump needed?
15. Heating (tempering). By hot water or steam? Note steam pressure at coil and type of condensate return.
16. Is cooling tower required?
17. Has customer provided shades, venetian blinds, or awnings—or will he—for sun exposed glass?
18. Number, size, and location of exhaust or supply air fans.
19. Special installation work. Will there be building or fixture modification, cutting, patching, redecorating, etc.?
20. Is is to the customer's advantage to do any of the installation work?

Kysor Cab Conditioner Gives Uniform Cooling

CADILLAC, Mich. — "Constant, uniform" cab air conditioning by means of a self-powered, packaged unit "easily installed on any cab roof" will be offered to the trucking industry this summer by Kysor Heater Co. here.

The conditioner, named the "Blunorther" from the southern colloquialism describing an extremely cold wind or a sharp temperature drop, is the result of a two-year development project by Kysor, which has 31 years' experience in the development and manufacture of heaters and temperature and pressure controls, the company said.

ONE UNIT FITS ANY TRUCK

"The Blunorther provides maximum economy through the design of a single unit which fits any make or model of truck, and maximum efficiency by maintaining cab temperature whether the truck is standing or moving, and at any speed," Kysor stated.

Greatly increased driver efficiency and consequent increase in operating safety and reduction of time loss are predicted for users of the conditioner by R. A. Weigel, Kysor president.

"The Blunorther is designed for efficient operation at a 100° ambient temperature median and, by means of Kysor-developed unique expansion valve structure, will operate at temperature peaks up to 130° without stalling or freezing," the company said.

"BLUNORTHER" cab cooler installed on truck.

"On test at Austin, Texas the Blunorther delivered 200 c.f.m. of 44° air and maintained an average temperature of 74° through a truck cab at 96° ambient temperature and 35 m.p.h. speed.

"At 102° ambient temperature and 25 m.p.h. speed, the conditioner delivered 195 c.f.m. of 52° air and maintained a uniform cab temperature of 78°.

"The 1⅛-ton capacity conditioner weighs only 170 lbs., operates with 100% fresh air to pressurize the cab and distribute a uniform temperature, is contained in a streamlined housing 30⅛ by 30 in., 16½ in. high, which fastens to the truck cab roof through shock mounts, and requires only the cutting of a single aperture for cool air feed from the evaporator chamber into the cab.

RAIN BAFFLES

"Rain baffles in the evaporator chamber prevent the introduction of outside moisture into the cab.

"The Blunorther is powered by a lightweight, 3.9-hp. gasoline engine. The refrigerant is 'Freon-12.' All parts exposed to the weather are of aluminum or copper, and all hose lines are of flexible 'Freon-proof' and vibration-proof construction.

"A small door in the side of the conditioner housing gives access to the pull starter of the engine. An independent gasoline tank is designed for separate mounting at any convenient point on the truck frame, to avoid having a gasoline supply atop the truck cab.

"An electric fuel pump supplies gasoline to the carburetor, which has a positive-action float control to prevent overflow. Ten-hour operation is provided with five gallons of fuel."

A. L. Munson Enters Business In St. Louis As Consulting Engineer

ST. LOUIS—Opening of a consulting engineering office here was announced recently by A. L. Munson, formerly general manager of the air conditioning division of Sears & Piou.

Called A. L. Munson and Associates, the firm will specialize in air conditioning, heating, cooling, and refrigeration for residential, commercial, industrial, and church applications.

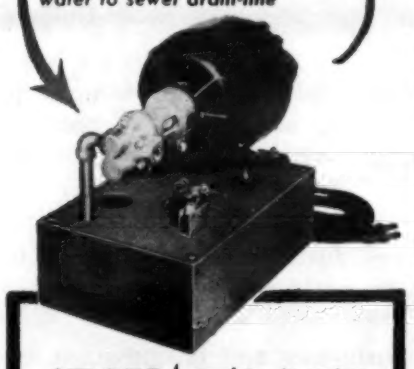
Prior to his connections with Sears & Piou, Munson had spent 20 years with York Corp., five years with Carrier Corp., and three years with Albert Kahn Associates.

He said he designed the first blood plasma freezer for Parke-Davis Co. and designed refrigerated welding equipment to speed spot-welding of aluminum for aircraft during World War II.

Munson's office is at 20 S. Gore St. Telephone number is Woodlawn 1-7628.

New HIGH-PRESSURE CONDENSATE DISPOSAL UNIT

designed to eliminate pumping water to sewer drain-line



$74.50 complete—to contractors F.O.B. Dallas*

- ⅓ H.P. Motor
- Hot-dipped galvanized tank

EXCLUSIVE FEATURE: condensate accumulating in tank is pumped against 100 lbs. pressure of condenser water-line through check valve directly in condenser water-line at air conditioning unit, thence to cooling tower.

*Or order from jobber

ASK US FOR COMPLETE DETAILS

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5643 Dyer Street • Dallas, Texas

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BOX A5244, AIR CONDITIONING & REFRIGERATION NEWS

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5 MODELS—2 TO 10 TONS

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STORES BARS
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CLINICS

Cools or heats • De-humidifies
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Here is Larkin's answer to the ever-increasing demand for year-round comfort conditioners. When you see it . . . when you compare it . . . when you price it . . . then you will understand why we say it is another triumph for Larkin—manufacturer of air-conditioning equipment for nearly 25 years.

See your wholesaler today for complete information about the all-new Larkin Comfort Conditioner. Write us for the name of the one nearest you—or for descriptive literature.

FEATURES THAT SELL AND SATISFY

- Larkin air-conditioning coil—eight fins per inch, continuous fin, staggered tubes, for highest efficiency and lowest operating cost
- Compact cabinet, all-steel, rust-resistant, beautifully finished with baked-on-enamel
- Fiber-glass insulation
- Pressure-type, centrifugal, dynamically balanced, forward curved fan wheels
- Frictionless, self-aligning bearings completely encased in Neoprene
- Resilient base motors on adjustable mounts
- Two-direction, adjustable discharge grille
- Easily removed, throw-away filters
- Heating coils for use with steam or hot water
- Slotted hanger bars
- Easily installed, easy to service
- Backed by the engineering skill and manufacturing reputation of Larkin Coils—one of America's leading makers of commercial and industrial refrigeration and air-conditioning equipment

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"Originators of the Cross Fin Coil"

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AIR CONDITIONING & REFRIGERATION News

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F. M. COCKRELL, *Founder*

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MAY 23, 1955

They'll Do It Every Time . . . . . by Jimmy Hatlo

AFTER 25 YEARS OF SWEAT AND TEARS FOR THE BANK OF NEW ROQUEFORT, TREADMILL WAS FINALLY MADE A BRANCH MANAGER AND FIGURED HE WAS SET FOR LIFE..
AS A REWARD FOR A LIFETIME OF LOYAL SERVICE--THE BANK OF NEW ROQUEFORT IS PROUD TO PROMOTE RUTLEY TREADMILL TO HEAD OF OUR SHAD ROW BRANCH---AND I AM HONORED TO PRESENT THIS WATCH AS A SLIGHT TOKEN OF ESTEEM FROM-- AHEM--HIS EMPLOYERS AND FELLOW EMPLOYEES..
JIMMY HATLO
2-14
AND THEN ONE COLD, DISMAL DAWN HE PICKED UP THE MILK AND THE MORNING PAPER.. AND THIS IS WHAT HE READ...
DAILY TROMBONE
LOCAL BANK SOLD TO COLOSSAL TRUST CO.
NEW ROQUEFORT BANK ABSORBED BY STATE-WIDE BANKING CHAIN.
"WILL SWEEP CLEAN WITH NEW BROOM," SAYS COLOSSAL PREXY!
RUMORED LOCAL HEADS WILL GET HEAVE-HO!
RUTLEY! WHAT ARE YOU STANDING OUT THERE TRYING TO GET PNEUMONIA FOR? OF ALL THE....
PLOP!
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OFF THE CHEST

Tel Aviv, Palestine

Editor:

I suppose you will be surprised to get a letter from this corner of the world, but since I started reading your paper, I felt the urge to write by appreciation.

I love to take some minutes off and peruse your paper, especially the "Inside Dope," before I pass it on to the bosses.

I am working as secretary with the leading refrigeration plant in Israel, and that's how I was introduced to your paper. I believe you have hit on the right idea of advertising, although if I may say so, the beautiful models which are always standing at the side of the advertised products do look a bit out of place in their brief apparel.

But, maybe you are right, after all there is nothing more obvious and eye-catching than a beautiful woman.

ADINA HABER

Welbilt Stove Co., Inc.
Maspeth 78, L.I., N. Y.

Editor:

The letters selected in your "Off the Chest" column are always of interest. We especially appreciate their "clearing house" nature.

LEON TAUB,
Chief Engineer

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SUPERMARKETS

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WITHOUT A DROP
OF WATER*

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The Super-Privileged Rely Upon Unfair Laws

The following truths are presented without further comment:

The Norris-LaGuardia act of 1932, and subsequent interpretations by the Supreme Court, exempt unions from responsibility for *unlawful* acts of their officers, members, or agents—unless a union constitution specifically authorizes illegal actions.

In other words, labor union members are above-the-law privileged people.

A union which hires a thug isn't liable for the damages he does unless a bigwig orders *in writing* said picket to beat up non-strikers—or passes an *ex post facto* resolution approving the deed.

Thus sayeth the Law.

Labor unions and labor leaders, furthermore, don't have to worry about restraints imposed by anti-trust legislation. They are exempt from such worries.

Many types of coercion by businesses and businessmen are illegal. The same types of unfair conduct, when practiced by labor unions and labor leaders, are entirely legal. Thus it is that foolish laws encourage a mode of class privilege.

In the field of Labor Law our Anti-Trust Acts are not an instrument of equal justice.

Example: Unions can compel unwilling employes to join their "closed clubs," *and pay dues,* lest they be excluded from a job they need or want.

Many years ago agreements through which employers kept employes from joining labor organizations were branded as "yellow dog" contracts.

Every criticism attached to old-fashioned "yellow dog" deals—as a violation of abstract justice—applies equally to contracts which, in one form or another, make union membership a condition of employment.

Even our supposedly-sovereign States are inhibited in the task of regulating wildcat unions by dominant Federal labor laws.

An amendment to the Wagner and Taft-Hartley acts has been proposed, *and should be passed,* which specifies that state legislatures can propose local policies in regard to strikes, picketing, and the "closed shop."

While bringing up these problems we do not intend to leave the impression that we are "anti-labor."

Unions, in their more enlightened moments, do a great deal of good. However, it is our position that politicians shouldn't erect and maintain a class of Politically Privileged Poohbahs just to get votes and campaign contributions from rich Union treasuries.

Laws which apply to the majority (the rest of us) should be enforced against puissant minorities. And *vice versa.*

The Caste System should have no place or recognition in America.

None of us should be super-privileged.

Agree?

Residential Air Conditioning

Where To Put Heating-Cooling Thermostat In Year-Round Air Conditioning System

DETROIT — Where should the heating-cooling thermostat be placed in a home for best operation?

"The best place," according to R. H. Luscombe, general sales manager for Penn Controls, Inc., "is in the room where the occupants are most comfortable and which cools the fastest. This is generally the living room.

"You won't believe this—nobody does, though it is proved to be scientifically so," he told a group of Detroit heating and cooling servicemen recently, "but the best location for the thermostat is between 24 and 30 in. off the floor. That is the comfort level.

"Placed there," he said, "the thermostat can do a better job of adjusting to changing temperature than you can. Why? Because changes in temperature are noticed at the floor first. And the closer to the floor you put the thermostat, the better temperature control you will have.

"For heating, cold air always settles at the floor. It leaks in from the outside under doors and windows and spreads over the floor quickly. For cooling, leakage of heat from the outdoors also seems to come in at floor level, too.

"And, if you put the thermostat down about two feet off the floor, the occupants of the house will not be fussing with it so much, thus giving it a chance to perform its function undisturbed."

However, he noted, tradition has it that the thermostat should be 5 ft. off the floor and that is where it is always installed and probably will continue to be.

Luscombe also pointed out a number of places where a thermostat should not be put. Don't put it above a radiator, register, or fire place and avoid water pipes, hot air stacks, and chimneys.

Avoid a location where the sun's rays will strike the thermostat and, he warned, watch out for mirrors that may reflect the sun's rays to the thermostat though the thermostat may be out of their path itself.

Other spots to avoid include a wall adjoining the kitchen, over a TV set, near lamps of all kinds, furniture in which people sit, walls without fire stops or headers, and outside walls. Stay at least two header spaces away from outside walls, he urged.

Home Air Conditioning Moving to Fresno, Calif.

FRESNO, Calif. — Home Air Conditioning Co. will move from San Bernadino, Calif. to Fresno during May, according to James E. Backus, vice president.

Present Fresno offices are at 2443 Belmont Ave. It is understood that negotiations are already under way for the leasing of a building in which to launch manufacturing operations.

The Home organization manufactures custom-built heating and cooling systems for homes, stores, and trailers, Backus said. A force of 40 employes will be required when the plant gets into full swing operation by early summer.

George Peverill of Fresno is president and Robert C. Tucker is secretary.

Worthington Color Film Depicts Benefits of Home Air Conditioning

NEW YORK CITY — Premier showing of a new 13-minute sound motion picture in color, "The Case of the Hot Weather Blues," was held at the Worthington Corp. exhibit room here recently.

Designed as a non-commercial venture, the film shows homeowners and potential home builders benefits derived from air conditioning—both in cooling and in year-round conditioning.

Besides the comfort and health advantages, the picture calls attention to such potential savings as reductions in housework and cleaning bills. It also shows different types and styles of units that can be installed, depending upon the job to be done.

A special musical score was written for the film which was produced by Will Kohler of Cinelux Productions.

Worthington will release the production for television audiences and for public and private showings during the spring and summer seasons, according to Matt Lawler, vice president of the firm's Air Conditioning & Refrigeration Div.

Prints of the film are available on loan to public groups by Worthington Corp., Visual Aids Unit, Advertising and Sales Promotion Dept., Harrison, N. J.

10 Million Dwellings Air Conditioned by '65, Roberts Predicts

DAYTON—By the end of 1965 more than 10 million U. S. dwellings will be equipped with air conditioning units and the retail air conditioning business will be approaching the billion-dollar-a-year level, it is predicted by Mason Roberts, General Motors vice president and head of Frigidaire Div.

By way of comparison, Roberts pointed out that today there are only about 1½ million homes in the country partially or completely air conditioned.

"Air conditioning is already having a marked effect on the sale of homes in many sections of the country," he declared. "There is a growing feeling among builders and their customers that a house is not truly modern unless it is air conditioned. This attitude is becoming more and more prevalent, and the demand for air conditioned houses is on the upswing.

"We think that industry will sell over five times as many residential central system units in 1965 as in 1955," Roberts continued.

He predicted air conditioners of all types will be sold at a rate of nearly two million per year by the end of 1965. "Most of this equipment will go to the residential market," he said.

Rheem Names Meyer Product Specialist In Eastern Region

CHICAGO—John B. Meyer has joined Rheem Mfg. Co. as product specialist for air conditioning for the eastern region, it was announced by Vearl J. Heinis, general sales manager.

In joining air conditioning activities of Rheem, Meyer leaves his previous world-wide assignment with the Military Air Transport Command. As air conditioning and refrigeration engineer, he had charge of installation and maintenance of equipment in both tropical and arctic climates, under both arid and humid conditions, according to the company.

Prior to this experience, his work covers more than 15 years of engineering in air conditioning, refrigeration, and mechanical contracting.

In his new position with Rheem, Meyer will headquarter at the company's plant in Sparrows Point, Md.

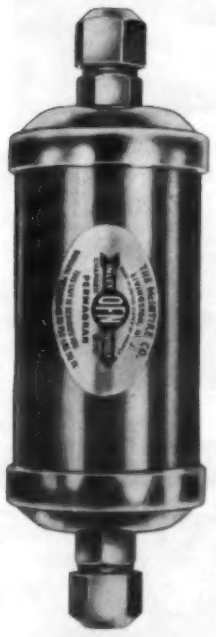
Tideland Firm Chartered As Air Conditioning Business

BURAS, La.—Tideland Refrigeration Co., Inc. here has been granted a charter by the Secretary of State. Authorized capital stock is $3,000. The firm will engage in the air conditioning business.

We make no test tube claims

Beware of dramatic demonstrations, figures and claims for moisture and acid removal under *controlled* conditions. The real test is what actually happens inside a hard-working refrigeration system, under all kinds of operating conditions. That's why—

Every McIntire DC FILTER-DRIER is rated and guaranteed on field-proven experience



By this method you are insured of the highest on-the-job drying performance and practical, usable data you can depend on.

Valuable Facts, Figures, Data in New Catalog!

Every claim, every selection chart, every rating we make for DFN driers is based on countless field tests and installation reports. They take the hocus-pocus and guesswork out of drying—give you an easy, accurate way to know what size DFN drier to use, its capacity, its pressure drop, for each system.

Ask your wholesaler for a copy of the New DFN Catalog R-9, covering driers, filters, strainers and accessories. Or, write us.

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THE McINTIRE COMPANY • Livingston 11, N. J.

Mueller Climatrol announces a new Combination Year-round Air Conditioner

Lets you cash in on the growing demand for all-season comfort ...two ways:

1. *You can sell it as is — as a combination heating and cooling unit.*

2. *You can sell it as a furnace alone. And since it comes with an integral cooling casing, you have a prospect for a refrigeration assembly later on.*

Gas or Oil Heating ...with cooling now or later

The Type 128 (gas) — 228 (oil) furnace is a prewired unit compact enough to install in closet, basement, or utility room — 59¾" high (to top of casing) x 47½" wide x 36" deep (including burner). It has 100,000-Btu input. All controls, flue, etc. are at front for easy access.

It's an attractive, quality-built unit with the kind of advanced features you expect from Mueller Climatrol — such as a heavy, welded-steel heat exchanger and a large blower. The oil type 228 can easily be converted to gas.

Although it has an integral cooling casing, the Type 128-228 costs less than many standard furnaces. A vestibule for both oil and gas is available as optional equipment.

The Type 928 cooling unit is a 2- or 3-hp refrigeration assembly mounted on a frame that slips easily into the cooling casing provided with the Type 128-228 heating unit.

The Type 928 operates on single or 3-phase current. It uses the same blower as the furnace. A backdraft damper is furnished as standard equipment with the furnace.

There's no doubt about it — this Mueller Climatrol combination unit is one of this year's best potential money-makers. And right now's the time to make the most of it. Write us today for details: Mueller Climatrol, Dept. 255, 2056 W. Oklahoma Avenue, Milwaukee 15, Wisconsin.

9-102

98th Anniversary NEARLY 100 YEARS OF MANUFACTURING QUALITY COMFORT EQUIPMENT

Why Philco Devised Service Program To Replace Hermetic Units In Field

A revolution is taking place in the household refrigerator servicing field—a change that may also have a pronounced effect on design. Instead of replacing the entire hermetic system (motor-compressor, evaporator, and condenser), Philco Corp. is now promoting field replacement of these major components, especially the compressor.

Reasoning behind this startling departure from usual practice is outlined by James M. Black, manager of Philco's appliance field service, in the accompanying article, which he presented as a talk before the ARI-RSES Educational Conference in Atlanta.

And while Black was giving the talk, Joe F. Denton, Philco district service representative in Atlanta, actually replaced a unit on the platform, as shown in the accompanying photos.

ACTUAL demonstration of replacement of hermetic unit in field is made by Joe F. Denton, Philco service representative in Atlanta, during presentation of accompanying talk. Here Denton removes old unit.

REPLACEMENT hermetic is spotted under watchful eye of Paul Reed, RSES Educational Director. At right is restriction tester devised by Philco to check restrictions in system.

By James M. Black, Manager, Appliance Field Service, Philco Corp.*

A few short years ago a well trained refrigeration serviceman was capable of repairing and/or replacing a defective component on any refrigeration system. This man was qualified to render good, efficient service when and where it was required.

Through their training and experience it was considered normal to repair a leak in the suction or discharge lines, repair or replace a defective compressor, replace an evaporator or condenser coil, or add refrigerant to a system.

These men were able to handle a soldering torch, a halide leak detector, and any other special tools or equipment needed to repair a defective refrigerating system.

Then we announced the sealed refrigerating system which allowed the handyman to replace a complete system when he assumed that was the reason the refrigerating system was defective. This was often determined when the other electrical components were replaced by a process of elimination and not often because the actual problem was properly determined by a well trained trouble shooter and serviceman.

This particular serviceman very soon became the normal man to expect when a refrigerator, freezer, or individual room air conditioner required service.

His limitations made it impossible to do anything other than correct the problem through a process of elimination.

This condition has been allowed to exist long enough and a practical solution has to be found to correct this problem in the very near future.

What can be done to assist these men in their training and assure the owner of a refrigeration appliance that he can obtain good, reliable service performed by well trained and therefore capable servicemen? What new types of service procedures are required to give the best kind of service to our consumers?

*Presented at the ARI-RSES Educational Conference in Atlanta.

New Program for Servicing Sealed Systems In Field

We will answer these questions and give you the facts and reasons why Philco Corp. has opened the door to a new kind of service for repairing sealed refrigerating systems in the field.

The refrigeration and appliance service industry through the new Philco program will be able to assist the American refrigeration serviceman by once again raising his technical ability through proper training and well guided service management.

A program such as this has been needed for the past 10 or 12 years. In this period of time the refrigeration and appliance serviceman has changed from a well trained refrigeration technician to what is commonly called today a nut and bolt mechanic.

Due to the ever-expanding growth of domestic refrigerators, freezers, and individual room air conditioners, the appliance manufacturer, his distributors and dealers, as well as our most important customers, have been made to suffer additional expense through the necessity of complete sealed systems. Inventories, shipping expenses, and other unforeseen charges that all add up to increased service cost for the American public.

These facts and their very definite affect on our industry caused Philco Corp. and many other large manufacturers to look over their service program and study methods and procedures to improve service, cut down expenses, and train men capable of handling this growing potential industry.

In an effort to evaluate the many benefits of this program, let us start by examining the advantages to a customer who already owns a refrigeration appliance.

Delay Has Been Obstacle

One of our greatest obstacles when trying to restore a defective refrigerating system has been the horrible delay required to check the customer's refrigerator and find the refrigerating system defective, then make a call to your dealer organization and request a new sealed system.

Your dealers in most cases do not carry refrigerating systems as a normal part in their parts department. It therefore becomes necessary for the dealer to contact his local distributor organization. If the proper unit is available at the distributor level, it is to be shipped to the dealer who in turn forwards it to the proper serviceman either in his own employ or the service contractor who renders service to this dealer's customers.

1 to 5 Hours Needed To Install New Unit

At the present time and regardless of manufacture, it takes between 1 to 5 hours to install a new sealed unit in today's refrigerators. Every year new features and automatic advantages increase the time consumed while repairing a refrigerating system in the customer's home.

These problems could be continually brought out at this time and I would venture to say that I could stand here and talk about problems of this nature through the rest of the day and most of the night.

I can probably best sum up this topic by asking a question once put before the Appliance Service Man-

(Continued on next page)

Save your energy! Use dead-soft DRYSEAL. You can make the most intricate bends with your fingers . . . no tools of any kind required. And its ductility and special temper make it extremely easy to flare for compression fittings without danger of splitting. To make sure you get a tube that is free of even the slightest trace of dirt or moisture we double crimp DRYSEAL on both ends, at the factory. This is the final step in manufacturing, immediately following a special cleaning and dehydrating operation, which keeps dirt and moisture from entering the tube. This double crimping does not interfere with installation for it is made in such a way that it permits DRYSEAL to be passed through any opening large enough for the tube itself. Tube sizes—⅛" to ¾" O.D. The DRYSEAL carton, attractively designed for easy identification, contains one 50-foot coil . . . is easier to handle, light weight, economical and sturdily made to assure protection of the tube in stock and in transit.

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FILTER-DRIER
UP TO 5 TONS
NO PRESSURE DROP
MOLDED REMCAL DRYING
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Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiberglas depth filters and spun-end copper shells. Available to the trade through wholesalers everywhere.
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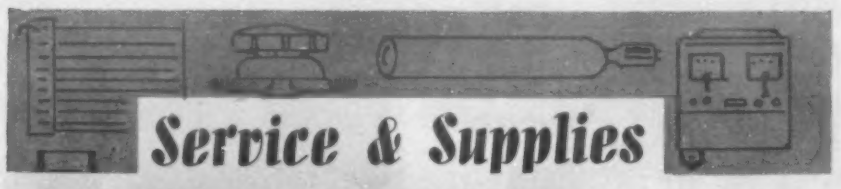

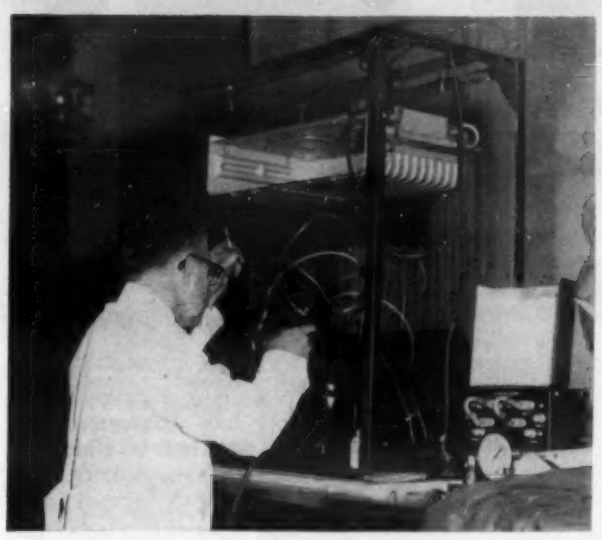

LINES are brazed by Denton as replacement procedure nears final stages. Entire job was clocked in 42 minutes.

Servicing Hermetics In Field--

(Continued from preceding page)

agers by Mr. Paiste, the vice president of Philco Corp.'s Service Div., and I quote:

"Is there a man in this room that would like to explain to Mrs. Jones why the food in her refrigerator is allowed to spoil while the serviceman calls his dealer who calls his distributor who in some cases calls his factory and asks that an emergency shipment be made so that Mrs. Jones' refrigerator can be restored two or three days after it became defective?"

Gentlemen, in the estimation of my superiors and in my own humble opinion, a procedure of this kind is for small people in a small business. The American refrigeration market is not a small business and certainly is only hindered by small men.

Best Possible Service For Customer Is Our Job

Most of you represent a large manufacturer in this industry. Your job and my job is to supply the best possible service to our customers. Through these efforts, we build our company and we certainly bring respect to the servicemen who represent us throughout America.

It is not my intention to stand here and belittle any other type of service, but I would like to impress on you that good training, sound judgment, and a well balanced service program such as this will cause the American public to say, "Maybe I can't have immediate action on any other product in my home, office, or my building, but the refrigeration servicemen have certainly made great strides toward the preservation of food and the welfare of my family."

The second portion of this program is relative to our distributor and dealer organizations. There is not a distributor or a dealer representing a major line that would not like to have parts in his parts department that would enable one call service on a sealed system.

Inventories Cut, Economies Realized

In our own programs, we have emphatically proven that though we required 67 different refrigerating systems in the past, we now can handle the majority of our complaints with seven motor compressor assemblies.

These assemblies cost at least 30% and in some cases as high as 60% less than a sealed mechanism would cost. I do not believe any more need be said about the sound economy this program is based on.

Seven motor compressor assemblies such as you see on this platform can be placed in the trunk of a serviceman's car. Just picture one of your servicemen getting seven crated sealed units in the trunk of his car. There are many more advantages to this program, but I feel these are a few of the most important.

From a manufacturer's level, we of course very willingly accept the economy of a program like this, but let me point out one of the advantages that in our eyes is even more important.

Your engineering department is limited when designing a domestic refrigerator, or a freezer, or an air conditioner, because the design must include enough space and special panels to allow the sealed system to be replaced. Think for a moment, if you will, about a space just large enough to allow a motor compressor assembly to fit into. I do not believe it is possible for you and I to realize what a designing engineer can do with these advantages. From my limited experience with design people, let me point out a few:

The evaporator or condenser can be put on either side, the top, bottom, or even the back plate. Insulation with a better K factor can possibly be used because it can be completely sealed between the inner and outer shells. Therefore, the appliance can be smaller in outside dimensions.

Any improvements in the development of motors or compressors even to the extreme of electronic devices can be substituted five years from now providing they are as small or smaller than the original space requirement. If and when this door is opened you can rest assured the few advantages mentioned won't even fill a small corner of this large room.

All this can be accomplished when your servicemen are properly trained in new techniques. The Philco motor compressor program is the original step required to start this ball in motion.

As representatives of the service management in the refrigeration industry, our immediate job is to train and supervise the men you select to carry out this program. When Philco service management accepted this responsibility, we developed a 40-hour training course as the first step in our training program. We used 35mm roll films to illustrate the step by step training requirements. As each picture is placed on the screen, a long play record completely explains the importance of this illustration.

After each section of the training such as basic fundamentals, component functions, soldering and brazing techniques, etc., a completely equipped shop is used for practical training. In this shop each man is assigned a complete set of tools and a work bench and individually under the watchful eye of factory trained supervisors, this man gains the practical knowledge required to do a good job.

When he has completed his training and his supervisor is satisfied with his workmanship, he is presented with a diploma similar to what you would receive when you had successfully completed any technical school. From this time forward he receives direct monthly mailings on all our service literature, new techniques, changes, and some of our future thinking.

At this time I would like to introduce Joe F. Denton who has directed the training of this program in each distributor organization found in his area. Most of you won't be able to see what he is doing while he demonstrates an actual motor compressor change on this platform. Therefore, I will explain the steps as he physically completes a motor compressor change when special test equipment or special apparatus is used.

I will try to explain its design, function, and practical assistance. During this period, I will also bring out highlights of our motor compressor design.

Steps In New Procedure

Procedure to be followed by steps.

1. Crimp suction and discharge lines.

2. Nick lines at crimp and allow refrigerant to escape.

2a. While system is purging, uncrate and prepare the new motor compressor assembly including necessary process loop preparations.

3. Remove old motor compressor from mounting base.

4. Place new motor compressor assembly on base and secure properly.

5. Solder suction and discharge lines to proper sections of process loop.

6. Set up restriction tester and complete restriction test.

7. Purge system three times.

8. Open compressor valves and allow trapped charge to enter complete system.

9. Check operation and evaporator for cooling effects.

10. Run complete performance test to assure proper operation.

The above-mentioned steps are not in detail but detail for each step can be found in the motor compressor and component manuals.

This program is not limited to the replacement of a motor compressor. We have successfully, for the past two years, added other component changes as our program has progressed. At this time we are able to change any component such as a condenser, evaporator, or tubing assembly on any Philco refrigerator or freezer.

We have also proven that this program can be successful and is successful due to a well planned program and good supervision.

Once again, I would like to impress on you that this program is a challenge to you as service managers and servicemen because through its effect and your effort, you will fulfill your most important obligation to the consumers of America. You will be able to give them good, fast, reliable service at a minimum cost.

During our past two years, Philco has been able to compile a very practical and honest set of figures which tell us, after a repair of this nature has been made, how many times we have had to make a second call in order to restore the product to its normal operating conditions.

I am sorry but I do not feel it would be fair to the corporation I represent to actually quote these figures, but I will say that second calls due to improper workmanship are much less than the defective refrigerating systems found in a distributor's warehouse due to improper handling. Only one sixth are second failures compared to sealed units.

I would also like to finalize my portion of the program by telling you that our customers have accepted this program and consider it much better than the old method. Our distributors and our dealers have accepted this program and though I must honestly say they have had to accept the growing pains of a new program.

From Philco Corp.'s top management, we have been told our program is a tremendous success. The Philco Service Department realized that with a program as new, as different, and as important as this program is, we had to receive the complete cooperation and guidance of our factory engineers, our production engineers, and our development engineers at Philco. The relationship between the Engineering and Service Department has played the number one part of our success in this and other service developments.

THE ONLY COMPLETE LINE OF HERMETIC AIR CONDITIONING COMPRESSORS
THE WORLD'S LARGEST
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FOR THE REFRIGERATION INDUSTRY
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Tecumseh's complete line of hermetic air conditioning compressors lets you pinpoint the compressor that is "performance matched" to your particular requirements. Engineered and tested to meet the increasing demand for air conditioning, Tecumseh's new line with 15 compressor models offers you flexibility of design, plus quietness and efficiency under the toughest possible conditions. All models deliver full tonnage within the horsepower range and are designed to meet new code restrictions covering power factor and current limitations. The larger sizes are available for single or three phase and by changing only the electrical components, the basic compressor can be used for water or air cooled applications. Add these features to compact size, light weight and low cost, and you'll agree it pays to have a choice when your choice is Tecumseh. Write today for Bulletin #100 containing detailed information and specifications concerning Tecumseh's new line of Hermetic Air Conditioning Compressors.
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EXPORT DEPT.— P.O. Box 2280, 24530 Michigan Ave., W. Dearborn, Michigan

What's New

When requesting further information on new products, please use "Information Center" form.

Hand Truck 'Walks' Upstairs, Handles 350-Lb. Load

KEY NO. E-540

PHILADELPHIA—By using a new lightweight magnesium hand truck, one man can take a window air conditioner upstairs and put it on the window sill alone, as well as handle any major household appliance up to 350 lbs. up and down a flight of steps without help, according to L-S Heating & Engineering Co.

Equipped with a series of rubber-treaded "legs" in addition to the usual wheels, it "walks," instead of being dragged, upstairs when its handles are pumped up and down.

When the legs are folded, it is a standard appliance truck with regular belt treads for light loads. It is available with or without an air conditioner lifter, according to the manufacturer.

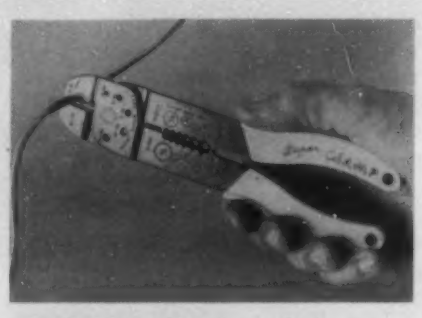
New Slide Calculator Estimates Heating Needs

KEY NO. E-541

PITTSBURGH—A slide calculator for estimating electric heating requirements is available from Edwin L. Wiegand Co. here.

The pocket-sized slide chart is useful for estimating either industrial tank heating needs or comfort heating requirements of rooms in the office or factory.

Kilowatt capacities can be obtained by inserting dimensions and other specifications of the particular job.



Tool Has Many Uses For Electrical Workers

KEY NO. E-542

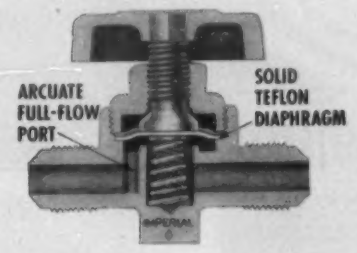
HARRISBURG, Pa. — A new Super Champ hand tool which crimps insulated solderless terminals and connectors; shears bolts and machine screws, leaving no burrs to file and no damaged threads; cuts wire cleanly; and strips wire sizes 22-10 has been introduced by Aircraft-Marine Products, Inc.

Stripper notches serve an additional purpose as a wire size gauge. There's also a stud gauge, etched on, for judging stud, bolt, and screw sizes.

Said to be easy to use and to carry, the tool is compactly made of heat-treated steel.

Insulating sleeves of yellow Tenite butyrate plastic cover the handles.

The Super Champ comes packaged with a supply of splices, terminals, and pigtails for electrical connections, according to the company.



Smaller Valve Introduced For Refrigeration Lines

KEY NO. E-543

CHICAGO — New refrigeration line valves, which are claimed to cut the size of this type of equipment by one third without reducing flow, have been announced by The Imperial Brass Mfg. Co. here.

Known as "Imperial Diamond Valves," the new units are said to substantially reduce valve costs. They are offered with either flare or solder connections in sizes from ¼-in. to ⅝-in. o.d.

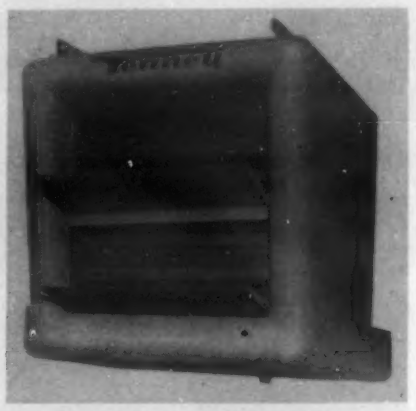
"The smaller size of these valves makes possible far more compact installations," the manufacturer stated, "and contributes to the industry's trend in this direction. Because of their economy, the new valves encourage the use of hand valves for many applications where they may now be omitted.

"In addition to their compactness, they provide new ease and positiveness of operation. They embody a solid 'Telflon' diaphragm which forms a soft seat with the body of the valve.

"This diaphragm is impervious to all refrigerants and is not affected by aging or extreme operating temperatures. It is designed to withstand unlimited openings and closings. Two turns or less are required to open or close the valve.

"Copper tube extensions are provided on solder type valves to dissipate heat so valve can be soft or silver soldered into line without disassembly. Body is forged brass and has integral mounting bracket."

Complete information on Diamond Valves is provided in Bulletin No. 115-REF available from the manufacturer.



'Angle-Air' Unit Easy To Install and Service

KEY NO. E-544

UNION, N. J. — Tenney Engineering, Inc. has announced the introduction of what it claims is a "revolutionary" new cooling unit, the "Angle-Air."

A company spokesman cited the new unit cooler's "significant combination of easy-to-install and easy-to-service features."

"Only three steps are required for complete installation," it was stated. "1. Hang template mount. 2. Slide unit into place on rail hangers. 3. Connect refrigerant, power, and drain lines. These features allow for easy one-man installations.

"Other features include suction line provision for simple expansion valve bulb location, integral heat exchanger, sensitive aluminum 'Facetized' fins mechanically bonded on electro-tin plated copper tube, adjustable louvers, and vibration mounted motor for quiet, smooth operation.

"Available in a wide range of capacities—4,000-40,000 B.t.u.—Angle-Air unit coolers are 'engineered' for every refrigeration job. A smooth modern design adds considerably to the attractiveness of their outward appearance."

Bulletin No. 109-55, printed in two colors, gives full physical specifications and complete application data on the Tenney Angle-Air coolers.

OVER SIZE, FULL LENGTH CONDENSER
TWIN BELT DRIVE
PROPERLY ENGINEERED FAN
FAN TYPE FLY WHEEL SPOKES
OIL FILL PLUG
RECEIVER LIQUID VALVE
RECEIVER INLET VALVE
STRONG MALLEABLE IRON LEGS
PLATE STEEL BASE
ADJUSTABLE MOTOR RAILS EASE BELT ADJUSTMENT OR MOTOR CHANGING
LARGE, PUMP-DOWN-CAPACITY FULL-LENGTH RECEIVER
Lehigh BLU-COLD COMMERCIAL REFRIGERATION
Lehigh HEAVY DUTY features are both INSIDE and OUT...
CONTROLLED GASKET THICKNESS ASSURES UNIFORM PISTON VALVE-PLATE CLEARANCE.
CHOICE OF CONNECTIONS PERMITS CONVENIENT INSTALLATION OF CONTROL LINES.
ALL CASTINGS OF FINEST CLOSE GRAINED ELECTRIC FURNACE GREY IRON FROM LEHIGH'S OWN FOUNDRY.
VALVE PLATE PRECISION GROUND AND LAPPED. HEADS ARE FINEST SWEDISH STEEL.
ALL MOVING PARTS CONTROLLED TO .0005 TOLERANCE THROUGHOUT.
ALL OVERSIZE BEARING AREAS —AN ASSURANCE OF LONGER, TROUBLE-FREE WEAR.
HEAVY DUTY HARDENED SHAFT TO CONTROLLED STRAIGHTNESS.
E-55 HEAVY-DUTY COMPRESSOR
LEHIGH HEAVY DUTY UNITS FROM ½ HP. THRU 5 HP. ARE EQUIPPED WITH MULTIPLE COMPRESSION RINGS.
REMOVABLE CYLINDER BLOCK. NO NEED TO REMOVE COMPRESSOR BODY FROM SYSTEM TO SERVICE, REPAIR OR CLEAN CRANKCASE AREA. A REAL TIME & LABOR SAVER!
LARGER CRANK CASE CAPACITY ASSURES AMPLE OIL SUPPLY FOR CONTINUOUS HEAVY DUTY OPERATION.
Lehigh HEAVY-DUTY construction goes much further than rugged pump design. EXTRA CAPACITY is assured by such specifically engineered features as over-size condensers, full-length receivers, fan-type fly wheel spokes and properly designed fans. Servicing is simplified by conveniently located plugs, valves and control connections. Removable cylinder blocks save time and labor in crankcase area servicing. Motor changing and belt adjustment are expedited by adjustable motor rails.
These features are characteristic of all Lehigh HEAVY-DUTY UNITS
1/3 thru 5 H.P.
AIR-COOLED — WATER-COOLED
COMBINATION AIR-WATER COOLED
. . . for every HEAVY-DUTY purpose — commercial, industrial, refrigerated transportation. Write for latest catalogs.
All BTU CAPACITIES determined by ASRE STANDARDS
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Manufacturers of Malleable and Grey Iron Castings, Refrigerating Equipment, Air Valves, Automatic Vending Machines

Information Center

For *more information* on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

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Commercial Refrigeration

FAN SECTION ON THE WESTINGHOUSE 10-ton "Unitaire" can be mounted in 10 different positions, W. H. Sickels, retail syndicate representative for Westinghouse Electric Corp., explains to Phil Peshkin of Kingan Products, Milwaukee.
—KEY NO. E-545—

DOUBLED DISPLAY SPACE is provided in the new two-shelf meat and dairy refrigerator exhibited by Friedrich Refrigerators, Inc. at the SMI exposition. Carl G. Stevens (l.), Friedrich sales promotion manager, runs over the features with Victor Fabian, Detroit distributor. KEY NO. E-547.

GREAT INTEREST IN National's low-level frozen food merchandiser was reported by James Kitzman (l.) of National Market Equipment Co. Discussing features of the case are Supermarketers John Donohue of New London, Conn., Theodore Shotton of Hartford, Conn., and (r.) Bill Gleason of National Market Equipment.
——KEY NO. E-549——

STAINLESS STEEL SPOT DISPLAY UNIT for frozen foods was exhibited by the National Chemical Refrigerant Corp. Ernest Freedman, sales manager, notes how the "Re-Fridgit" cartridge in the center of the case will hold proper temperature for an entire day. The cartridge is reactivated by placing it in a freezer for a day.
—KEY NO. E-546—

POSING WITH THEIR COMBINATION normal and low temperature walk-in freezer box are N. E. Alman (l.), president of the Freezer Box Div., Annapolis Yacht Yard, Inc., and H. P. Janz, production manager. KEY NO. E-548.

FIRST PUBLIC SHOWING OF THE HILL produce merchandiser providing refrigerated top display in 7½ and 10-ft. lengths attracted attention in C. V. Hill & Co. booth. KEY NO. E-5410.

For further information on products pictured on this page please refer to key numbers and use Information Center Blank on page 14. Additional pictures from the Supermarket Show will appear in a future issue.

DEFROST PROBLEMS?
Here's the ANSWER!...

ELECTRIC
Heat-Cel

"HEART OF THE SYSTEM"

Approved by Underwriters Laboratories

Automatic DEFROST
FOR NEW OR EXISTING INSTALLATIONS

- Heat for re-evaporation supplied by low wattage, long life ELECTRIC HEATER.
- Positive, consistent, economical.
- Performs efficiently in any ambient, regardless of location or season.
- Independent of compressor operating time or type (air or water cooled).
- Solution temperature automatically maintained by thermostat.
- Adjustable for individual operating conditions.
- No special controls needed for winter-time operation.
- Convenient "plate" design allows flat-against-wall mounting.
- Heater replaceable in the field.
- Patented DOLE VACUUM principle insures faster heat transfer for quicker defrosting.

Defrosting "Kit" includes Heat-Cel and Accessory Package containing all necessary controls

Write for Engineering Catalog DE.

DOLE REFRIGERATING COMPANY
5920 NORTH PULASKI ROAD, CHICAGO 30, ILLINOIS
103 PARK AVENUE, NEW YORK 17, N. Y.
In Canada: Dole Refrigerating Products Limited
44 Elgin Street, Brantford, Ontario

Filtrine
"Taste-Master" PURIFIERS for

WATER - COOLERS ICE MAKERS

Stop ... rust, dirt chlorine taste
... service breakdowns due to rust & sludge

Insures service satisfaction for all coolers, ice-makers! Clear, taste-free water . . . crystal ice . . . every day . . . in all locations.

FILTRINE MFG. COMPANY
53 LEXINGTON AVE. • B'KLYN 38, N. Y.

"My Typhoon District Manager is always Johnny-on-the-spot," says Don Kissell (left), Typhoon Los Angeles dealer.

TO GET ON THE MOST PROFITABLE FACTORY-DEALER TEAM IN THE BUSINESS, TIE UP WITH

TYPHOON AIR CONDITIONING
505 Carroll St., Brooklyn 15, N. Y.

- COMMERCIAL AIR CONDITIONERS, 2 TO 25 TONS
- RESIDENTIAL YEAR-ROUND UNITS FOR GAS OR OIL
- ROOM AIR CONDITIONERS, ⅓, ½, ¾, 1 H.P.
- PACKAGED HEAT PUMPS, RESIDENTIAL & COMMERCIAL

MAKE IT A HEAT-X FAMILY AFFAIR FOR YOUR REFRIGERATING JOBS

Protect your good relations (customer relations, that is!) with products from the Heat-X family tree. Specify Heat-X air conditioning and refrigeration products—soundly engineered to enhance your good name.

SHELL AND COIL CONDENSER RECEIVERS—Cooling coils of copper tubing. Shell of seamless steel tubing. ½ to 5 H.P.

HEAT INTERCHANGERS—Inner-Fin construction. No oil trapping problem. Low Freon charge required. 7½ to 100 Tons.

WATER CHILLERS—Copper Inner-Fins in refrigerant passages. Water passages of non-ferrous construction. Single pass. 2 to 90 Tons.

SHELL AND TUBE CONDENSERS Copper Inner-Fins in refrigerant passages. All water passages of non-ferrous construction. 5 to 150 Tons.

CLEANABLE INNER-FIN CONDENSERS—Inner-Fins in refrigerant tubes for minimum size and maximum heat transfer. Cleanable tubes. ½ to 15 H.P.

CAST ALUMINUM HEAT INTERCHANGERS—Inner-Fin construction. No internal joints. Suction line and liquid line are separate tubes. ¼ to 10 Tons.

CAST ALUMINUM LIQUID COOLERS Separate refrigerant and water circuits cast within aluminum block. No freeze-up damage.

Request complete descriptive bulletins on these and other Heat-X products.

HEAT-X, Inc.
BREWSTER • NEW YORK

On these two pages are pictured new products shown at the National Restaurant Show in Chicago. For further information on any of these products please use the "Information Center" blank on page 14 and refer to the key number at the end of the cutline with each picture. Additional pictures will appear in a future issue.

What Was New

At the National Restaurant Show

MR. MEYER FELSHER
United Engineering Corporation
Miami, Florida

He sold 1... which sold 10 more!

Carrier ICEMAKER sales keep snowballing!

You can count on it! *Every icemaker you sell sells MORE icemakers.*

That's why more and more salesmen are climbing on the Carrier bandwagon. They make *money* and keep on making money.

Here's Meyer Felsher, a top producer at United Engineering in Miami, to vouch for it:

"I took facts and figures about the Carrier Automatic Icemaker to the Miami area manager of a national restaurant chain. After a careful study he gave me an order for one machine. That one machine proved such a time and money saver that we've put one or two machines in all of their nearby restaurants. And every time they open a *new* restaurant they call for another icemaker. Just one sale led to at least 10 more — with orders still coming in!"

Look at these advantages that help *you* roll up Carrier Icemaker sales in no time at all!

Savings are amazing. Cost for water and electricity is usually less than ⅓ the price of delivered ice.

There's a model for every need — for flakes, or cubes, or cubes-and-crushed. 12 sizes or combinations.

Icemakers are automatic. Units start, stop, even clean themselves automatically.

MAIL THE COUPON. We'll send you the complete story on Icemaker prospects —who and where they are—how to reach and sell them. Get all the facts now!

Carrier air conditioning · refrigeration industrial heating

CARRIER CORPORATION, 310 S. Geddes St., Syracuse, New York

Tell me more about these Carrier icemaking machines that sell themselves.

Name_____

Business_____

Address_____

City_____ State_____

OPERATING THE PUSH-PULL DAMPER that changes Leitner Equipment Co.'s "Super Visicold Convertible" display case from half to full refrigeration is Nancy Jason of the company. She also holds open the self-closing door. KEY NO. E-5411.

A SINGLE COMPRESSOR WITH two solenoid valves operates this two-temperature freezer-refrigerator shown by McCall Refrigerator Corp. says H. B. Osterhoudt, sales manager. The 45-cu. ft. unit shown has a 65-cu. ft. companion model. KEY NO. E-5412.

C & S Opens Branch

SHREVEPORT, La.—C & S Air Conditioning & Electric Co. has opened its second outlet—the Broadmoor branch at 125 E. Kings Highway. Ray Bowlin is manager of the new branch.

IDEAL Speed-Freeze PRODUCTS

BEVERAGE COOLERS AND INSTANTANEOUS DRAFT BEER COOLERS. (With Refrigerated Faucets)

WRITE IDEAL COOLER CORPORATION 2953 EASTON AVE · ST. LOUIS 6, MO.

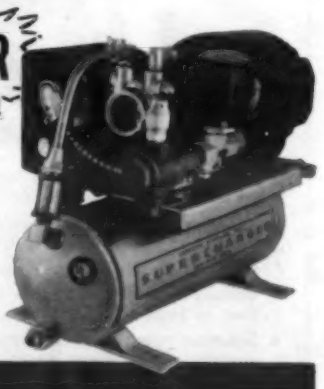
JUDY JOHNSON of Chicago helps draw attention to the Mallow Products, Inc. "Kool Boy" for refrigerated storage of restaurant food supplies. KEY NO. E-5413.

KAY ANDERSON, St. Louis representative for Victory Metal Mfg. Co., happily poses with the firm's "Sno-Queen" 22-cu. ft. freezer with automatic defrost. It is available in capacities up to 90 cu. ft. ——KEY NO. E-5414——

"BOB-ETTE," Howard Refrigerator Co.'s new combination fountain and short order unit, is admired by Mrs. A. G. Sherman, Jr. of Grosse Pointe, Mich. while Jack Devlin, Howard midwest representative, explains features. —KEY NO. E-5415—

When It Comes to Carbonators . . .
WHAT'S BEST FOR YOUR CUSTOMERS IS DYNAMITE FOR YOUR SALES!

THAT'S THE SUPERCHARGER CARBONATOR BY CARBONIC DISPENSER



INCORPORATING THESE SUPERIOR FEATURES

1. Patented jet foamescent method produces highest degree of carbonation possible—93% to 100%. U. S. Patent #2,588,677.
2. Minimum number of moving parts, plus "Pump Sentinel," Carbonic Dispenser's exclusive fool-proof pump protection device, is users' insurance against costly repair bills.
3. Midget size—16"x13½"x9½". Giant Capacity—100 gallons per hour.

THE PREFERRED CARBONATOR—FROM NEIGHBORHOOD TAVERNS TO THE NATION'S FAMOUS COCKTAIL LOUNGES, FROM DRUGSTORES TO MAJOR LEAGUE BALLPARKS.

MAIL THIS COUPON TODAY

For literature outlining the opportunity now open to make bigger profits selling Carbonic Dispenser Equipment.

Name_____

Address_____

City_____ State_____

CARBONIC CD DISPENSER INC.

General Offices: Canfield, Ohio
Branch Offices:
1851 Randolph St., Los Angeles, Calif.

IN CANADA: GENERAL EQUIPMENT CORP., LTD., TORONTO, ONT.

Restaurant & Bar Equipment

EXAMINING PUFFER-HUBBARD's new two-temperature reach-in with 20 cu. ft. of freezer space and 35 cu. ft. of normal temperature space are Maxine Wall of Michigan City, Ind. and Bob Johnson of Puffer-Hubbard Mfg. Co. KEY NO. E-5415.

SANDWICH DISPLAY CASE WITH BAIN-MARIE TOP was introduced by Fogel Refrigerator Co. at the restaurant show as was Henry S. Robinson, Fogel's new national sales manager.
——KEY NO. E-5418——

THE WHOLE FRONT SLIDES OUT like a drawer for easy servicing on Dunhill Soda Fountain Corp.'s new "Mix-O-Matic" dispenser. Carl Thaw, Dunhill secretary, demonstrates. KEY NO. E-5421.

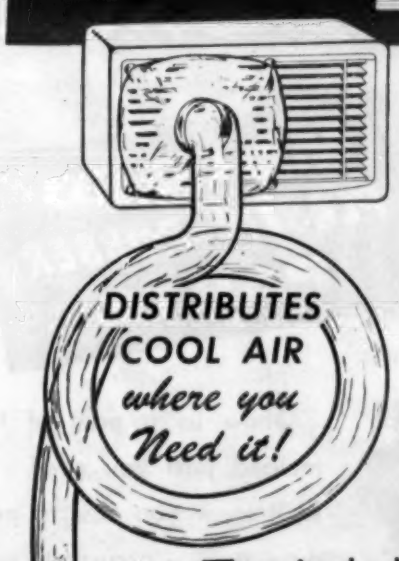
POINTING OUT THE WYOTT VALVE on the cream dispenser in United Refrigerator Co.'s new "Creamador" milk dispenser, Stuart Rabb of United (r.), tells J. D. McCampbell of Alhambra, Calif. that the door mounted dispenser holds 6 qts. of cream.
——KEY NO. E-5416——

SMALL USERS OF CRUSHED ICE are prospects for the new SF75WS ice maker. R. S. Lickteig, sales manager for American Gas Machine Co. (r.), tells Ben Colgin of the Texas Ice Machine Co., Dallas.
——KEY NO. E-5419——

DRAWING CRUSHED ICE from his model K ice crusher is S. C. Cantor, sales manager for Ice Appliances, Inc. Looking on are Sheldon Edelman and Harvey Bland of Chicago. The crusher is a companion unit to the company's ice shaver. KEY NO. E-5417.

POSING WITH TYLER REFRIGERATION CORP.'s new 10-ft. self-contained beverage cooler with stainless steel bar top are Bill Gallagher and Doyle Carpenter, both from Tyler.
——KEY NO. E-5420——

The New *
SPOT-KOOL
AIR CONDITIONER EXTENDER



Assures
MORE SALES
for You!
(at very nominal cost)

1. Include a SPOT-KOOL in your sales presentation and you'll sell more air conditioners because people like the idea of being able to cool additional rooms with one air conditioner.

2. Those who already have air conditioners will buy the SPOT-KOOL fast because it vastly increases the use of their equipment.

* Lightweight Plastic Tubing Adjustable up to 40 feet.

for more details, write to
Milprint Inc.
420 LEXINGTON AVE., NEW YORK, N. Y.

There's a simpler way...

C12-5010 Control with cross ambient type power element.

Handy Replacement Reference
No. 1544 lists nearly 5,000 replacement controls available for any job you tackle. This manual is not available from the factory. Purchase yours from your Ranco wholesaler now.

RANCO
AIR CONDITIONING CONTROLS

Your customers may not know one control from another . . . but they *do* know hot from cold. That's why smart servicemen—three times out of five—choose Ranco Controls to do the job. Dependable Ranco Controls save money—*and* customers.

You'll find a Ranco Control for air conditioning replacements . . . made to fit without a fight, to work without a worry. Ask your Ranco wholesaler for the *right* control for the right job. Install Ranco . . . to be sure.

Ranco Inc.
COLUMBUS 1, OHIO

WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS

MANUFACTURERS' AGENTS

A few choice territories available to well-established Manufacturers' Agents serving Refrigerator Wholesalers.

OUTSTANDING LINE OF
THERMOSTATIC EXPANSION VALVES

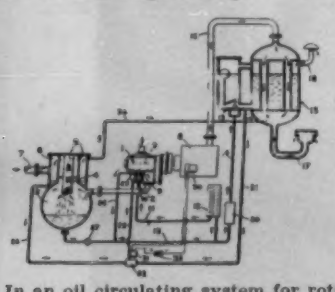
Aggressive representative assured *large volume of continuing sales.* Please send full information on territory covered, lines handled, experience, etc.

KOLDEX International • 1150 Broadway, New York 1, N. Y.

PATENTS

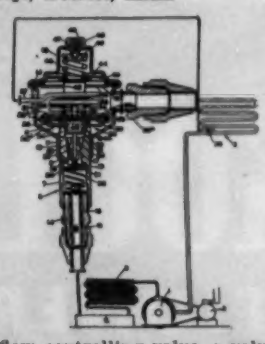
Week of February 8 (Concluded)

2,701,684. OIL CIRCULATING SYSTEM FOR ROTARY FLUID COMPRESSORS. Sylvan R. Hirsch, Longmeadow, Mass., assignor to Worthington Corp.



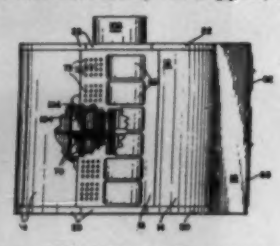
1. In an oil circulating system for rotary compressors, the combination with a rotary compressor having a discharge for compressed fluid, means for delivering lubricating oil into said compressor where it mingles with and is discharged with the compressed fluid, a receiver tank receiving the discharged compressed fluid from the compressor, a fluid and oil separator connected to said tank whereby compressed fluid passing through its point of use will pass through said separator, means for returning oil from said receiver tank to said compressor, a waste heat boiler, means for delivering part of the oil from said receiver tank to said waste heat boiler, means for delivering oil from said waste heat boiler to said rotary compressor, valve means normally preventing delivery of oil from said waste heat boiler to the compressor, and means for operating said valve means at predetermined intervals to permit delivery of oil from said waste heat boiler to the compressor.

2,701,686. THERMOSTATICALLY OPERATED VALVE HAVING PRESSURE LIMITING MEANS. Earnest J. Dillman, Detroit, Mich., assignor to Detroit Controls Corp., Detroit, Mich.



In a flow controlling valve, a valve member spring loaded to an initially closed position, a temperature responsive means operable upon change in temperature to move said valve member toward open position, said responsive means being bodily movable, stop means for said responsive means, means urging said responsive means with a predetermined force to an initial predetermined position against said stop means, and a pressure responsive means operatively connected to said temperature responsive means and operable upon occurrence of a predetermined pressure to move the same from said predetermined position away from said stop means in a direction permitting said valve member to close independently of the temperature state of said temperature responsive means.

2,701,746. SELF-SERVICE COLD STORAGE LOCKER. Morley W. Piggott, Seattle.

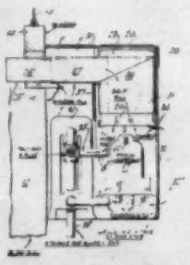


1. In a self-service cold storage locker of the type having a cabinet and a shelving unit positioned in the cabinet to rotate about a vertical axis, the shelving unit being divided horizontally and vertically into rows of wedge-shaped storage compartments, the improvement, comprising: the sidewalls of said cabinet being formed by a series of separable sidewall units of equal width which join one another on vertical lines, several of said sidewall units being identical, one sidewall unit forming a door unit having a separate door for each layer of storage compartments, independent latching means on each door, an electric motor and means connecting said motor to said shelving unit to rotate the same, an electrical control system having a selector corresponding to each storage compartment, said control system being connected to said latching means and to said motor and being operative to rotate said shelving unit upon selection of a compartment by its selector until the selected compartment is aligned with its door and unlatching only the door of the layer in which the selected compartment is located, whereby access is afforded to but the single compartment selected by its associated selector, and a switch, operated by each door, in said control system operative to inactivate said motor when said doors are open.

Week of February 15

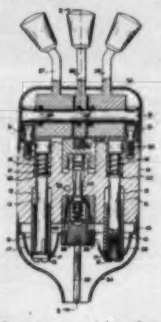
2,701,997. PACKAGED ROOM UNIT FOR CENTRAL AIR CONDITIONING SYSTEMS. Charles J. Thatcher, New York.

1. A compact, all-season, air conditioning unit for permanent or removable emplacement and use in association with, adjacent to and in front of a heat radiator and a window sill of a room window: comprising an elongated framework, an air-cooled compression-expansion refrigerating device having its elements arranged within the framework, together with cooling fresh air intake and heated air outlet ducts for the compression-expansion device each including a vertical duct section disposed within but at opposite ends of said frame work and an elbowed section for horizontal disposition relatively to the window sill above and



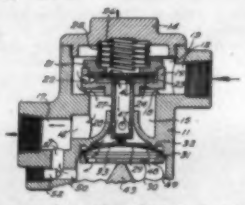
substantially at opposite ends thereof, said vertical and elbowed sections being adapted for telescopic joining to afford continuous passageways therethrough for air stream flow respectively from and to the window line and through said compression-expansion device; and a removable housing which comprises a vertical front and side panel member and a substantially horizontal top lid member assemblable therewith, said members being dimensioned and adapted for cooperation with a wall of a room and the sill of the window to encase said ducts, heat radiator, device and framework.

2,702,051. DISPENSING AND MIXING VALVE. Frank Welty and Raymond D. Welty, Youngstown, Ohio, assignors to Carbonic Dispenser, Inc., Canfield, Ohio.



1. In a valve assembly for mixing and dispensing carbonated beverages the combination of a body member having a centrally disposed outlet for low pressure carbonated water and a plurality of syrup outlets positioned in spaced relation mutually and with respect to said carbonated water outlet, a cup-like member secured to the lower end of said body member in fluid tight relation therewith and having therein an enlarged chamber for the entrapment of carbonated water issuing from said carbonated water valve, conical drip cups, one for each of said syrup outlets, depending integrally from said cup-like member and surrounding said syrup outlets in closely spaced concentric relation, said drip cups providing the only openings from said chamber for the discharge of carbonated water, the arrangement being such that a relatively restricted water outlet is formed between said drip cups and said syrup outlets whereby said syrup outlets are washed during each operation of the valve.

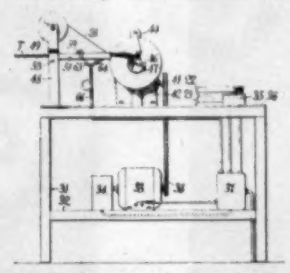
2,702,052. THROTTLING SNAP-ACTION VALVE. Richard D. Grayson, La Canada, Calif., assignor to General Controls Co., Glendale, Calif.



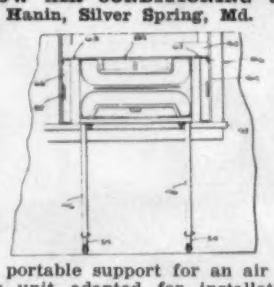
1. In a valve structure: a main valve and a supplemental valve; a connection for operating said valves in such sequence that the supplemental valve opens before the main valve opens and subsequently closes after the main valve closes; over-center snap-action means for operating said connection; means for applying force to said snap-action means so as to effect gradual movement of the same toward its dead-center position in alternate directions; and lost-motion means in said connection arranged so that both of said valves are snapped substantially simultaneously from closed to full-open position; said connection being such that subsequent closing operation of the valves effects, before the snap-action means reaches dead-center position, gradual closing of the main valve and maintenance of the supplemental valve in substantially full-open position until the snap-action means reaches dead-center.

2,702,166. MACHINE FOR FORMING SPIRAL HEAT EXCHANGE COILS. Oren Bishop, Somerset Center, and Charles C. Miller, Addison, Mich., assignors to Addison Products Co., Addison, Mich.

1. A machine for forming spiral heat exchange coils comprising a rotatable mandrel formed as a convolution of a spiral and having the edges of the convolution radially spaced, detachable latch means within the mandrel for gripping the leading end of a workpiece, a guide structure comprising a box having a bottom, sides, top and open ends, a work supporting track positioned within the box on the bottom thereof and between the sides, the width of the box being greater than its inside height, a supporting bracket for pivotally mounting the box adjacent one open end with the other end facing toward the mandrel, means for initially positioning the track of the box approximately tangent to the surface of the mandrel, the top of the box being formed with guide openings on either side of the track of sufficient size to receive spacing wires to be coiled with a workpiece fed through the open ends of the guide box.



2,702,175. PORTABLE SUPPORT FOR WINDOW AIR CONDITIONING UNITS. Irving Hanin, Silver Spring, Md.



1. A portable support for an air conditioning unit adapted for installation in a window having a stool, stiles and a vertically moving sash; said support comprising a horizontal support surface upon which the air conditioning unit is supported, a plurality of spaced depending legs carried by said supporting surface to maintain said surface in spaced relation above the floor so that said unit may be installed in the window with said supporting surface resting upon the stool of said window and projecting partially through said window, and a pair of extensible shields carried by said supporting surface intermediate its ends and having one of said shields carried at opposite sides thereof in transverse alignment, said shields extending laterally from and perpendicularly to said surface and adapted to extend between the opposite vertical sides of said unit and the stiles of said window so that when said movable sash is lowered to rest upon the top of said shields and said unit an air stop is formed.

U.S. Government Contracts Procurement Information

PROCUREMENT INFORMATION

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Huachuca Procurement Office, Signal Corps Supply Agency, Ft. Huachuca, Arizona			
Centrifugal blower assembly, series #B-3.	33 ea.	SC-36-039-55-1858	26 May 55
Temperature-humidity indicators, type 31, remote indicating portable, with 200' cable, one resistance type temperature element, and three resistance type humidity elements, or equal.	3 ea.	"	"
Humidity elements for type 31 Monmouth Electric Co., temperature-humidity indicator, or equal.	36 ea.	SC-36-039-55-1858	26 May 55
Headquarters, Camp Detrick, Frederick, Maryland			
Air conditioning Post theater bldg., T-611 in accordance with specifications and drawings.	Job	(18-064-55-200-B)	26 May 55
District Public Works Office, Sixth Naval District, Naval Base, Charleston, South Carolina			
Cold Storage Building, Marine Corps Reserve Depot, Parris Island, South Carolina.			
Officer in Charge, Navy Purchasing Office, Washington, D. C.			
Refrigerators, electric, self-contained, frozen food compartment.	113	(IFB-600-1342-55)	31 May 55
Freezer, domestic, Deep-freeze chest type. Unit	70	(IFB-600-1343-55	31 May 55
Base Contracting Office, Sedalia Air Force Base, Sedalia, Missouri			
Air conditioning of Squadron Hdqtrs. and Operations Bldg. S-51. Project No. SEDALIA (79-55)A, Sedalia Air Force Base, Sedalia, Mo.	Job	(IFB-23-606-55-39)	27 May 55
Air conditioning of Squadron Hdqtrs. and Operations Bldg. S-47. Project No. SEDALIA (77-55)A, Sedalia Air Force Base, Sedalia, Mo.	Job	(IFB-23-606-55-38)	27 May 55
Air conditioning of Squadron Hdqtrs. and Operations Bldg. S-49. Project No. SEDALIA (78-55)A, Sedalia Air Force Base, Sedalia, Mo.	Job	(IFB-23-606-55-37)	27 May 55
Air conditioning of Squadron Hdqtrs. and Operations Bldg. S-45. Project No. SEDALIA (76-55)A, Sedalia Air Force Base, Sedalia, Mo.	Job	(IFB-23-606-55-36)	27 May 55

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, Business Service Center, 8th & D Sts., S.W., Washington, D. C.			
Installation of refrigerating equipment, General Services Administration, Regional Office Bldg., Washington, D. C.	Job	(GS-R3-B-3738)	15 Jun 55

to your specifications

MOLDED PLASTIC-RUBBER PARTS

Show us a print of the molded part you need . . . we'll show you how to produce it . . . accurately and economically. Geauga's die design ability and molding production facilities assures prompt service at low cost.

BONDED to Steel

Rubber-to-steel molding in a variety of shapes available to your specifications.

Send Print for prompt quotation.

GI GEAUGA INDUSTRIES
MIDDLEFIELD, OHIO

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RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

MECHANICAL ENGINEER, B.S. M.E., Licensed Professional Engineer member ASHAE, 16 years in designing, estimating and installation of air conditioning and heating both commercial and residential applications. Present position lacks opportunity for advancement. Consider travelling as manufacturer's representative. Limited experience in consulting. Reply to BOX A5245, Air Conditioning & Refrigeration News.

SALES ENGINEER wishes to represent, preferably, nationally-known manufacturer in Midwest area. Have background of applying product to cases, cold storage rooms, air conditioning, etc. Also, wide knowledge of truck refrigeration. Have dealt with O.E.M. to consumer accounts. Will relocate if situation is attractive. BOX A5249, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

DO YOU call on locker plants? We need coverage in this type account for our nationally-famous home freezers—we ship direct at realistic factory prices—locker operators are leading all other outlets in freezer sales. Add our freezers to your line and double your commissions immediately. TRI-STATE ELECTRIC MFG. CO., Box 836, Lima, Ohio.

REFRIGERATION ENGINEER with full knowledge of heat transfer. Fine opportunity with major Middle West manufacturer. Must have M.E. degree and at least 5 years' refrigeration experience. For work in product development of commercial refrigerators, display cases, and air conditioning. Give resume of qualifications and experience. Salary open. BOX A5246, Air Conditioning & Refrigeration News.

EXPORT SALES assistant—Leading export manager organization in New York requires an assistant with good refrigeration background and experience to handle our refrigeration parts business. Refrigeration engineering not essential but helpful. Export experience not required. Excellent opportunity to learn export business and eventually head up this department. Starting salary moderate with a definite program for advancement and travel. Please submit resume of education and experience. BOX A5247, Air Conditioning & Refrigeration News.

COMMERCIAL AND air conditioning servicemen with wide experienced background. Many advantages and benefits offered by leading progressive organization. Your talents and capabilities recognized here. Location, Northern Jersey. Give details first letter. BOX A5248, Air Conditioning & Refrigeration News.

SALES MANAGER: Experienced in handling national promotion of agricultural or dairy equipment, or refrigeration equipment. Unusual opportunity for man with enthusiasm, intelligence and recognized sales managerial ability in a rapidly expanding business. Write BOX A5250, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

REFRIGERATION VALUES: Attention servicemen; send for our catalog of refrigeration parts; savings up to 50%. WALTER W. STARR REFRIGERATION SUPPLIES, 2833 Lincoln Ave., Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

WELL-ESTABLISHED BUTCHER supply and commercial refrigeration business established since 1925. Franchised lines. Eastern Ohio location in city of 200,000 serving an area of half million. Owner retiring. Will sell at inventory price, approximately $20,000. Address BOX A5243, Air Conditioning & Refrigeration News.

MISCELLANEOUS

MANUFACTURERS—SERVICE: Can you give proper service? Do you need warehouse facilities in Houston, Texas? We offer bonded and careful warehousing service with excellent packers. We know the trade. We believe that we can be a vital factor in the success of your marketing program in this trade center of the southwest. If interested, please furnish information as to present and anticipated sales as well as percentage you will allow. NATIONAL WAREHOUSE, P.O. Box 8164, Houston 4, Texas. (Air Conditioning & Refrigeration Products — Instrumentation Supplies — Automotive Products — Industrial Supplies.)

PRODUCTS WANTED: A medium-sized Michigan manufacturer with precision equipment planning further expansion wants refrigeration and air conditioning products. Will manufacture or purchase manufacturing and selling rights, pay royalties or purchase products outright. This is a dynamic organization with excellent technical staff, modern facilities, top sales organization and best connections. BOX A5240, Air Conditioning & Refrigeration News.

Refrigeration Problems
and their solution
by Paul Reed
For Service and Installation Engineers

Paul Reed

More on 'F-22' and 'F-12' Leaks

In the May 2 issue, under the title "Finding Leaks on 'F-22' and 'F-12'," we published a letter from a reader and out reply on the relative difficulty of finding leaks in "Freon-22" and "Freon-12" (or "Genetron-141" and "Genetron-12") systems. This reader seemed to have more trouble in finding the "Freon-22" leaks than "Freon-12" leaks, even though he was sure, due to refrigerant shortage, that leaks were present.

We replied that there seemed to be no reason why it should be more difficult to find "Freon-22" leaks than "Freon-12" leaks. We also cited the experience of John H. Spence, service manager of Hussmann Refrigerator Co., that they had had no more trouble in locating leaks of "Freon-22" than "Freon-12."

Since then we have received a note from Dan McCoy of Frigidaire that his experience also indicates that there is no difference in detecting "Freon-22" leaks than "Freon-12" leaks.

We recently received the following letter from Keith Barrigan of Caro, Mich., on this same subject. We publish it, for as Barrigan says, it may shed some light on the matter.

LETTER ON HIGH PRESSURE LEAKS

"I thoroughly enjoy the NEWS' informative articles on problems relating to refrigeration. In catching up on my reading I happened to light upon this article on 'Finding leaks of "F-22" vs. "F-12" ' and I think that I can throw some more light on the subject.

"Ninety per cent of the leaks in 'F-22' systems in my experience have been high pressure leaks. These leaks have been of two types. There has been the ordinary leak that will leak under any pressure; and then there is the leak that requires from 180 lbs. to 250 lbs. of pressure to leak.

"In order to find this high pressure leak, which is usually in a packing gland, or a silver soldered joint in the condenser, it is necessary to raise the head pressure to the point under which the original leak occurred. As the original excessive pressure was usually caused by a dirty condenser, it is a simple matter to block the flow of air through the condenser after system has been partially recharged.

"All leaks of this type are not in the high side of the system. I have found leaks in the low side that would leak at 35 lbs. pressure but would close up and not leak at all at 30 lbs. pressure.

"I have also found that there is more oil around 'F-12' leaks than there is around 'F-22' leaks. I believe that the man that asked the original question concerning 'F-22' vs. 'F-12' leaks had definite reasons for suspecting that 'F-22' leaks were more difficult to find; mainly because of the 'close-up ability' of high pressure leaks."

Another letter on this same subject has just been received in this morning's air-mail, from a service engineer who asks that his name not be used.

LETTER ON NATURE OF THE PROBLEM

"I encountered the same difficulty for about six months until I found out I wasn't depending enough on my leak detector.

"I have found 'F-22' leaks harder to find because of lack of oil film which we normally see with 'F-12' (most of these leaks are at flare nuts and service valves).

"Low side leaks are naturally hard to detect. However, I have found that if suspected to be an evaporator leak, it can be detected by 'Freon' vapor at the lowest point in the cabinet, unless the unit has been operating on a vacuum—if the latter, I would suggest charging and checking back after several days."

TWO POINTS OF AGREEMENT

It is significant that both of these service engineers bring out two points:

1. The need for adequate refrigerant pressure when hunting for leaks. Barrigan sets a minimum pressure of 180 p.s.i.g. for leak testing the high side, and 35 p.s.i.g. for leak testing the low side.

The 35 p.s.i.g. in particular is in accordance with our own experience. We also have found that unless the low-side pressure is at least 30 to 30 p.s.i.g., it is often difficult to detect and locate very small leaks.

Factories recognize the need of pressure in finding leaks. Most manufacturers use several leak tests of two or three types. The first leak test is apt to be the submersion test, in which the assembly, under dry air pressure, is submerged in a lighted tank of water (kerosene has also been used). Bubbles, of course, indicate the source of the leaks.

The pressure used in these factory submersion tests is usually always 250 to 300 p.s.i.g., except for some assemblies, such as compressors, that have seals or bellows that should not be subjected to such high pressures.

If, as on low temperature systems, there is not enough pressure on the low side for a leak test, the refrigerant pressure can be built up with nitrogen or CO_2 as has previously been described in this column.

2. "Freon-22" does not tend to show as much, if any, oil around the leak as "Freon-12." This is quite true, and moreover, quite understandable, particularly, for the low side. It is a well-known and established fact that oil separates out from "Freon-22" at the lower temperatures of from 5° to 10° and below.

If a service engineer gets in the habit of depending on oil spots to guide him to leaks, he will undoubtedly overlook some "Freon-22" leaks. As our unnamed service engineer says, the Halide torch leak detector must be used, and used carefully, in order to really go over a system to find the small leaks.

These are three interesting and helpful letters, and we appreciate the kindness of Messrs. McCoy, Barrigan, and the anonymous service engineer, in furnishing this additional light on the subject of finding leaks of "Freon-22" and "Freon-12."

Anyone else have any further information on this subject?

Wolverine Representative Moves Southern Office

HOUSTON, Texas—R. C. Cash, sales representative for Wolverine Tube in Tennessee, Mississippi, Alabama, and eastern Arkansas, has moved his headquarters from Memphis to Birmingham, Ala., announced Carl T. Fuller, southwestern district sales manager for Wolverine Tube., Div. of Calumet & Hecla, Inc.

The new Birmingham office will locate Cash closer to the geographical center of his territory.

Sterlairco Will Make, Sell UsAirco, Sterling Gas-Fired Unit Heaters

MINNEAPOLIS—David E. Feinberg, president of United States Air Conditioning Corp., and John E. Reed, chairman of Sterling Radiator Co., Inc. of Westfield, Mass. have announced the formation of a new company, Sterlairco Inc., owned jointly by U. S. Air Conditioning and Sterling's Heat Specialties Div. The new company will have its main office and factory in Westfield.

Effective May 1, 1955, Sterlairco took over the manufacturing, sales, and distribution of the "UsAirco" and Sterling gas-fired unit heaters. Sterling has been manufacturing the UsAirco units under license.

G. H. Stenner, president of Sterling's Heat Specialties Div., will also serve as president of the new company. C. E. Scott, a well known figure in the air conditioning and unit heater industries, will be vice president and general manager.

The complete UsAirco line of gas-fired unit heaters comprises regular propellor-fan models, the blower-heater type, pioneered by UsAirco, and the new duct heater.

Concentration of manufacture of these heaters in Westfield is expected to result in savings in production costs, while freeing UsAirco's Minneapolis plant for more air conditioning equipment.

NOW LOW COST AIR CONDITIONING FOR INDUSTRIAL HOT SPOTS!

Mr. Harold Bender, General Manager of the Swiss Cleaners, Indianapolis, Indiana, says: "I have seen a temperature reading in my plant of 120° F. at the hot heads, and after turning on units we had an 85° F. temperature of the air coming to the operator as he or she is working. That condition gives you the production that is necessary in extreme HOT WEATHER. A temperature drop of 30° F. gives you ideal employee relations and a much better QUALITY of work for happier customers."

COOLS 10° TO 18° BELOW THE OUTSIDE TEMPERATURE!!

GUARANTEED AIR CONDITIONING!

SATISFACTION GUARANTEED ON APPROVED INSTALLATION . . . OR WE WILL ACCEPT A RETURN OF THE EQUIPMENT WITHIN 60 DAYS AT FULL VALUE AND REFUND IN CASH.

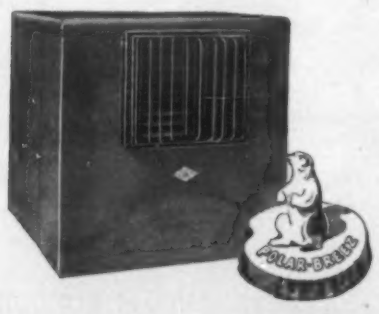
NEW V-15 "SYNCLINAL" UNIT GIVES ADDED —OXYGEN . . . FILTERING . . . COOLING.

Polar Breez is inexpensive to own and operate. . . . A 10 ton unit, big enough to cool a room 50' x 30' x 10' high, costs less than $1,000.00 COMPLETELY INSTALLED! Operation cost is less than 5¢ per hour for electricity and about $1.00 per year for water.

Polar Breez units supply 100% FRESH—COOLED—FILTERED AIR at all times and are IDEAL for Taverns, Small Restaurants, drug stores, Beauty Shops, Small Stores and All Industrial HOT SPOTS.

Polar Breez units are available in sizes of 3—5—7½—10—15 and 30 ton equivalent capacity to meet all requirements.

Exclusive Territories Open for Agents—Jobbers & Dealers.



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AIR COOLING ENGINEERING COMPANY
P.O. Box 744
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Please send me complete details on "Polar Breez" Air Conditioning.

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Company.....
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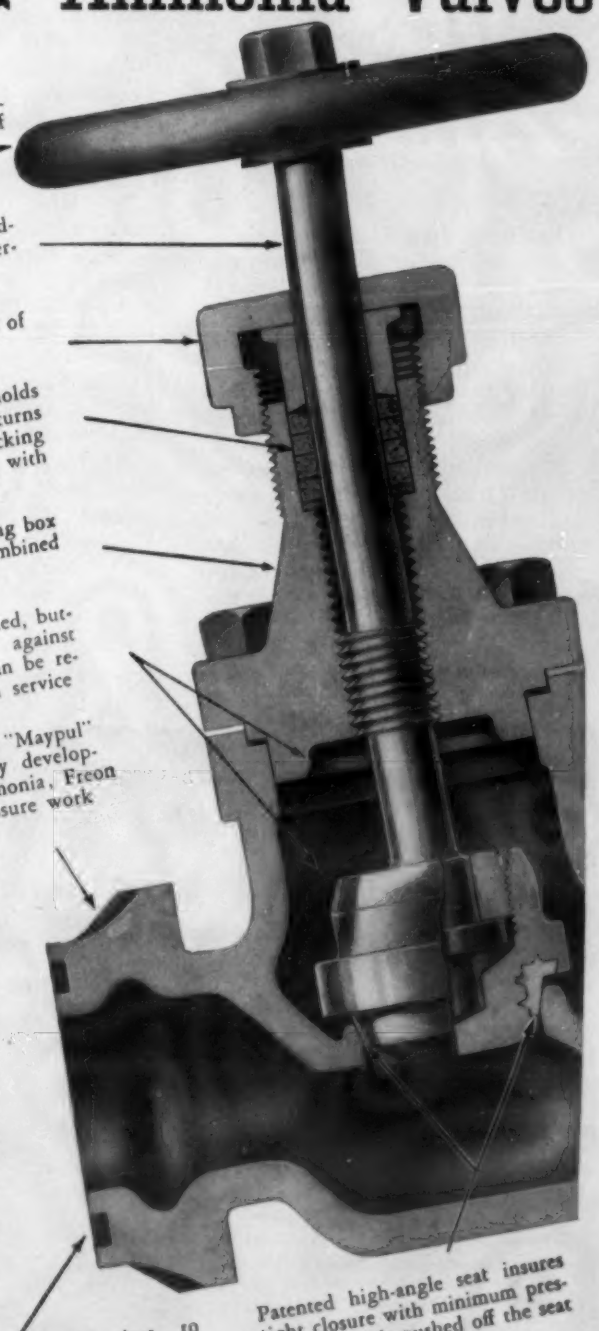
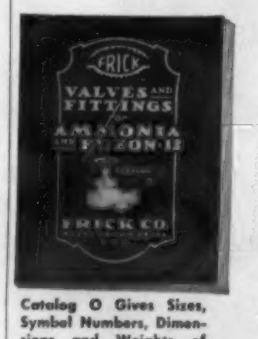
High-Pressure Freon & Ammonia Valves


Large hand wheel secured to squared end of stem
Long valve stem of cold-rolled steel, made oversize for strength
Packing nut and gland of rugged construction
Ample packing holds pressure while stem turns freely. Special packing supplied for use with Freon refrigerants
Usual collar, stuffing box and bonnet are combined into one piece
When fully opened, button back-seats against bonnet; valve can be repacked while in service
Castings of "Maypul" steel, especially developed for ammonia, Freon and high-pressure work
Flanges of standard sizes, to match other fittings. Screwed valves also available in sizes up to 2"
Patented high-angle seat insures tight closure with minimum pressure. Scale is pushed off the seat as valve enters



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ASRE Convention Program--

(Concluded from Page 1, Col. 2)

ance of Rotary Compressors," H. F. Lehmkuhl, Seeger Refrigerator Co.

"Moisture Migration in Hermetic Refrigeration Systems as Measured Under Varied Conditions," W. R. Brisken, manager, advanced engineering, General Electric Co.

TUESDAY A.M., JUNE 14

Technical session, F. Y. Carter, Detroit Controls Corp., presiding.

"Physiological Effects of Environment of Domestic Animals," H. L. Carver, Agricultural Research Center, Department of Agriculture.

"Insulation in Refrigerated Transportation Body Design," S. W. Eby and R. L. Collister, Armstrong Cork Co.

"Moisture Problems in Low Temperature Railroad Transportation," T. M. Elfving, president, Isoflex Corp.

"Rate of Solidification," D. L. Cochran, Stanford university.

TUESDAY P.M., JUNE 14

Domestic refrigeration engineering conference, F. L. Tarleton, Manager, Refrigeration Engineering, Hotpoint Co.

Aluminum Evaporators

"Introduction," F. L. Tarleton.

"Brazing Aluminum Evaporators," John Blomquist, Reynolds Metals Co.

"Roll Bonding Aluminum Evaporators," Mason Randel, Western Brass Div., Olin Mathieson Corp.

"Connectors for Aluminum Evaporators," E. G. Beck, Jr., The Stolle Corp.

"Corrosion and Electrolysis," R. L. Hadley, Eng. Mgr., Metallurgical and Ceramics Lab., General Electric Co.

"Finishing," R. B. Vanden Berg, Process Development Lab., Aluminum Co. of America.

TUESDAY A.M., JUNE 14

Forums: Sponsored by ASRE General Technical Committee. Chairman, John Engalitcheff, Jr., Baltimore, Aircoil Co.

"Rating of Cooling Towers," W. J. Donovan, moderator.

"Designation of Refrigerants," A. H. Lawrence, Jr., E. I. Du Pont de Nemours & Co., moderator.

"Distribution of Frozen Foods," H. O. Kirkpatrick, Union Asbestos & Rubber Co., moderator.

"Emergency Refrigeration During Disaster Periods," J. H. Spence, Hussmann Refrigeration Co., moderator.

"Natural Convection Condensers of Self-Contained Products," F. G. Peck, C. E. Ranney Refrigeration Co., moderator.

"Corrosion Preventing Finishes," R. A. Line, Hussmann Refrigeration Co., moderator.

WEDNESDAY A.M., JUNE 15

Technical session, S. J. Williams, Seeger Refrigerator Co., presiding.

"New Thermodynamic Properties of 'Freon-12'," R. C. McHarness, research supervisor, and Dr. B. J. Eiseman, Jr., research chemist, E. I. Du Pont de Nemours & Co., Inc., and Prof. J. J. Martin, University of Michigan.

"Vibration and Vibration Analysis of Commercial Units," C. A. Hathaway, chief engineer, and K. A. Merz, engineer in charge, Product Development, Torrington Mfg. Co.

"Some Practical Aspects of the Dielectric Properties of Refrigerants," D. A. Beacham and R. T. Divers, Central Engineering Staff, Materials Standards Dept., Carrier Corp.

WEDNESDAY A.M., JUNE 15

Air Conditioning Conference. Chairman, R. A. Gonzalez, director of application engineering and sales training, Airtemp Div., Chrysler Corp.; Assistant chairman, J. H. Broome, Minneapolis-Honeywell.

NAHB Air Conditioned Village, Austin Report

"Builders Viewpoint of Austin Village," N. A. Cole, architect-builder and president, Fabricon Co., Austin, Texas.

"Some of the Interesting Test Results of Austin Village," C. W. Nessell, Minneapolis-Honeywell.

"Field Application Suggestions from Austin Village," D. V. Petrone, president, Typhoon Air Conditioning Co., Inc.

"Notes on Equipment Design from Austin Village," I. P. Sharpe, manager, Product Planning, Home Heating & Cooling Dept., General Electric Co.

The Host Committee, under the chairmanship of J. B. Kupfer, will help members and guests see "The Braves" in action and enjoy Milwaukee's natural hospitality. Sightseeing trips have been arranged, also visits to several of the well-known breweries where buffet lunches will be served with the famous Milwaukee beer.

The annual ASRE golf tournament will be held at Tuckaway Country Club, Tuesday afternoon. On Sunday evening there will be open house for ASRE members and guests. A "Polish Panorama" will be featured by the Mazur Polish Dancers of Milwaukee.

Monday noon, the Welcome Luncheon will be addressed by Paul Pratt, assistant to the president of the Borden Co., who will speak on "The Food Industry." Prominent leaders of the industry will be presented and the new ASRE regional directors and other officers will be introduced.

The traditional ASRE cocktail party and dinner dance will be held Tuesday evening.

Stockholders Approve Merger of Welbilt and Detroit-Michigan Stove

DETROIT — Merger of Welbilt Stove Co., Inc., Maspeth, N. Y., and Detroit-Michigan Stove Co. here has been approved by stockholders of both firms.

The name of the new concern will be Welbilt Corp. It will operate in Maspeth, where Welbilt has its plant, and in Detroit at the Detroit-Michigan Stove plants. Headquarters of the corporation will be in New York City.

Welbilt manufactures room and residential air conditioners and electric and gas ranges. Detroit-Michigan Stove makes household and commercial cooking ranges and heavy metal products for the automotive industry.

Alexander P. Hirsch, former president of Welbilt Stove, has been elected chairman of the board of the new firm, and Henry Hirsch, former vice president and treasurer of Welbilt Stove, was chosen president. Named general manager of Welbilt Corp.'s Detroit division was Fred A. Kaiser, former president of Detroit-Michigan Stove.

Sen. Bill Would Require Safety Latches on Doors Of Refrigerators

WASHINGTON, D. C.—Refrigerators not equipped with an inside safety latch on the door would be barred from interstate commerce under a bill introduced remerce under a bill introduced by Sen. Mike Mansfield (D., Mont.).

The legislation is designed to prevent abandoned refrigerators from becoming "death traps" for children. A similar bill was introduced earlier by Sen. John Sparkman (D., Ala.).

Under Sen. Mansfield's bill, violators would be guilty of a misdemeanor and, upon conviction, liable to a prison term of not more than one year, a fine of not more than $1,000, or both.

Pointing out that there have been 99 icebox deaths recorded since 1948, the Montana senator said there are more than 50,000,000 iceboxes, refrigerators, freezers, and other such air-tight cabinets in use today, and the National Safety Council estimates they are being discarded at the rate of 2,000,000 to 3,000,000 a year.

Mfrs. Told To File Claims For Excise Refunds Soon

WASHINGTON, D. C.—Tax experts here state that manufacturers wishing to recover, from their excise tax payments, amounts paid on fulfilling warranties, should file their claims as soon as possible.

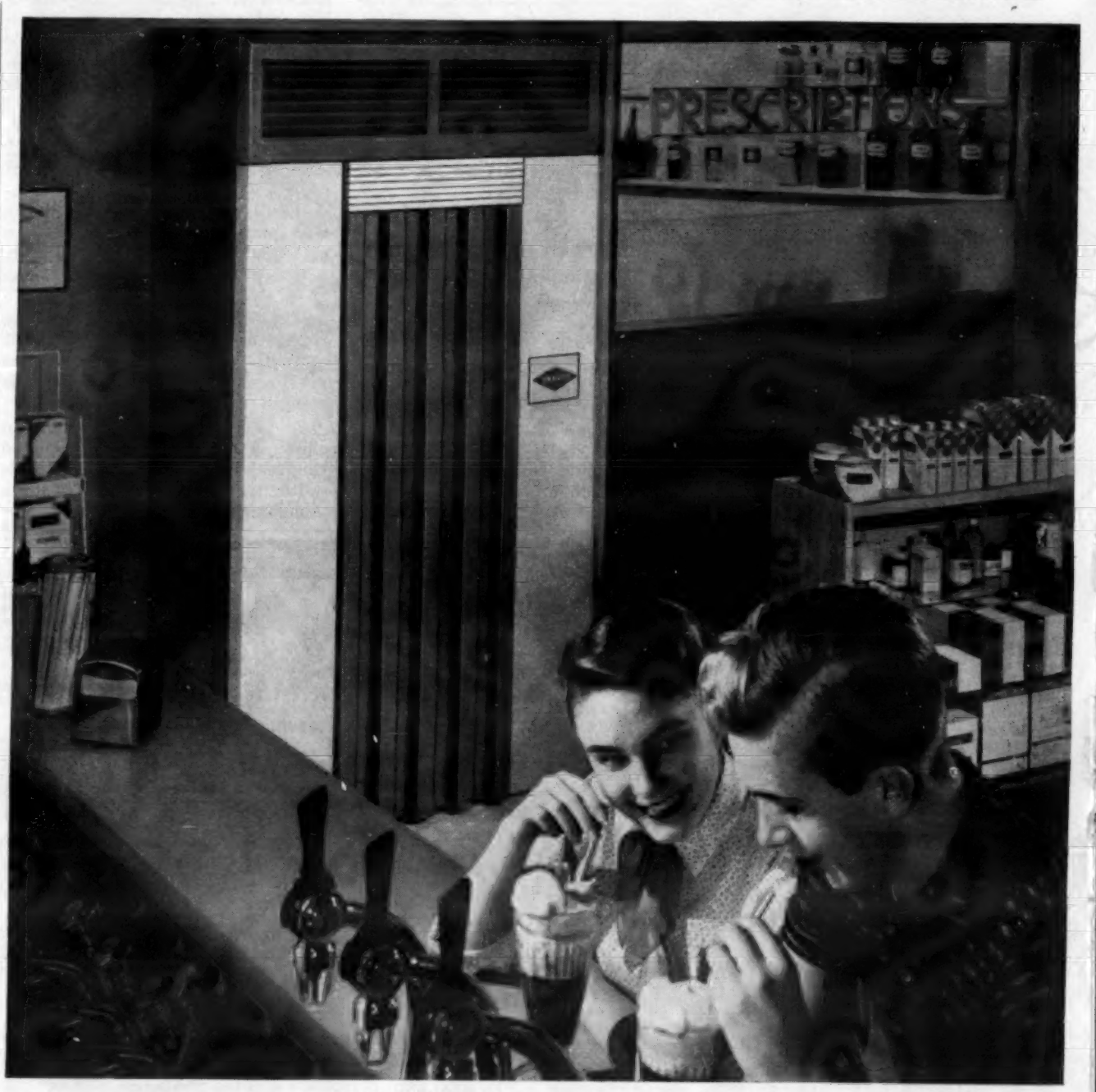
The United States Court of Claims, in a decision handed down June 8, 1954, decided that Frigidaire Div. of General Motors Corp. was entitled to recover excise taxes paid on the money it had expended in fulfilling 5-year warranties. On Feb. 15, 1955, the United States Supreme Court refused to review the decision of the Court of Claims, thus in effect upholding the decision authorizing the refunds.

The Bureau of Internal Revenue has been attempting to draft regulations to govern the processing of claims for refunds, but has thus far not come forward with a workable set of regulations.

What tax experts are warning manufacturers of is that the statute of limitations is running and manufacturers should not wait until the Bureau regulations are issued before filing claims for refunds.

Burke In New Home

JOPLIN, Mo.—Burke Refrigeration Co., air conditioning and refrigeration, has opened for business in its new location at 811 Main St.



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Efficient in operation and smart in appearance, the all-new UNARCO *ROYAL-AIRE* may be this year's most profitable investment for you.

The *ROYAL-AIRE* is styled to fit into most any background. Four-way directional louvers, generous-sized components, and a large vertical cooling coil provide maximum dehumidification and cooling. *The exclusive* UNARCO *pump-down control system guarantees instant cooling coil response* and reduces system-operating pressures.

The *ROYAL-AIRE* is available in 5 full-rated models, capable of conditioning exactly to *your* needs. It is especially adaptable to many different and normally difficult kinds of installations. Being "demountable" into three sections, it is extremely easy to handle and install.

Both to the contractor interested in building a reputation for quality, and to the buyer looking for efficient, dependable air conditioning...there is no better buy than the UNARCO *ROYAL-AIRE*.

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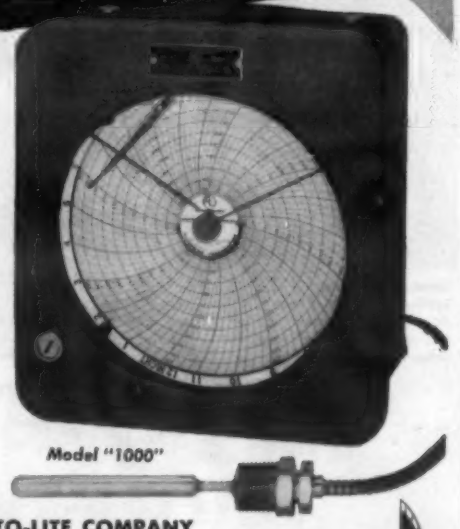
Newly designed, Model "1000" Auto-Lite Recorder gives permanent proof of temperature behavior. • 6" clear reading chart; various standard ranges from minus 40°F. to plus 550°F. • 3 standard types; choice of 24-hr. or 7-day cycle. • Electric or mechanical chart drive. • With capillary tubing for remote reading. Priced from $49.50.

Send for new catalog describing many styles of Auto-Lite temperature Recorders and Indicators.



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